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ABSTRACT

Results of a national survey of drug use among young males (19-30) are reported. For most drugs, half or more of the users used the drug less than 10 times. The data suggest a possible decline in the use of cigarettes. Several implications of the drug epidemic of the late 1960's are noted. Differences of drug use between blacks and whites seem to be diminishing. There is no indication of any decline in annual prevalence of use of any drug except psychedelics. Veterans show no higher rates of current drug use than nonveterans. Less than three percent of the sample report treatment for drug use. Other associated variables i.e. urban density, unemployment, non-conventional attitudes and lower educational levels are discussed. (BN)

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Young Men & Drugs - A Nationwide Survey

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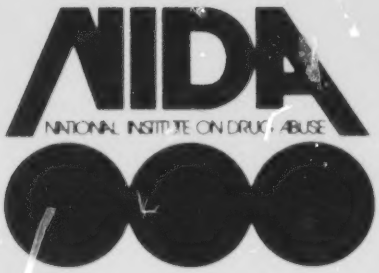

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YOUNG MEN AND DRUGS -A NATIONWIDE SURVEY

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February 1976

NIDA Research Monograph 5

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FOREWORD

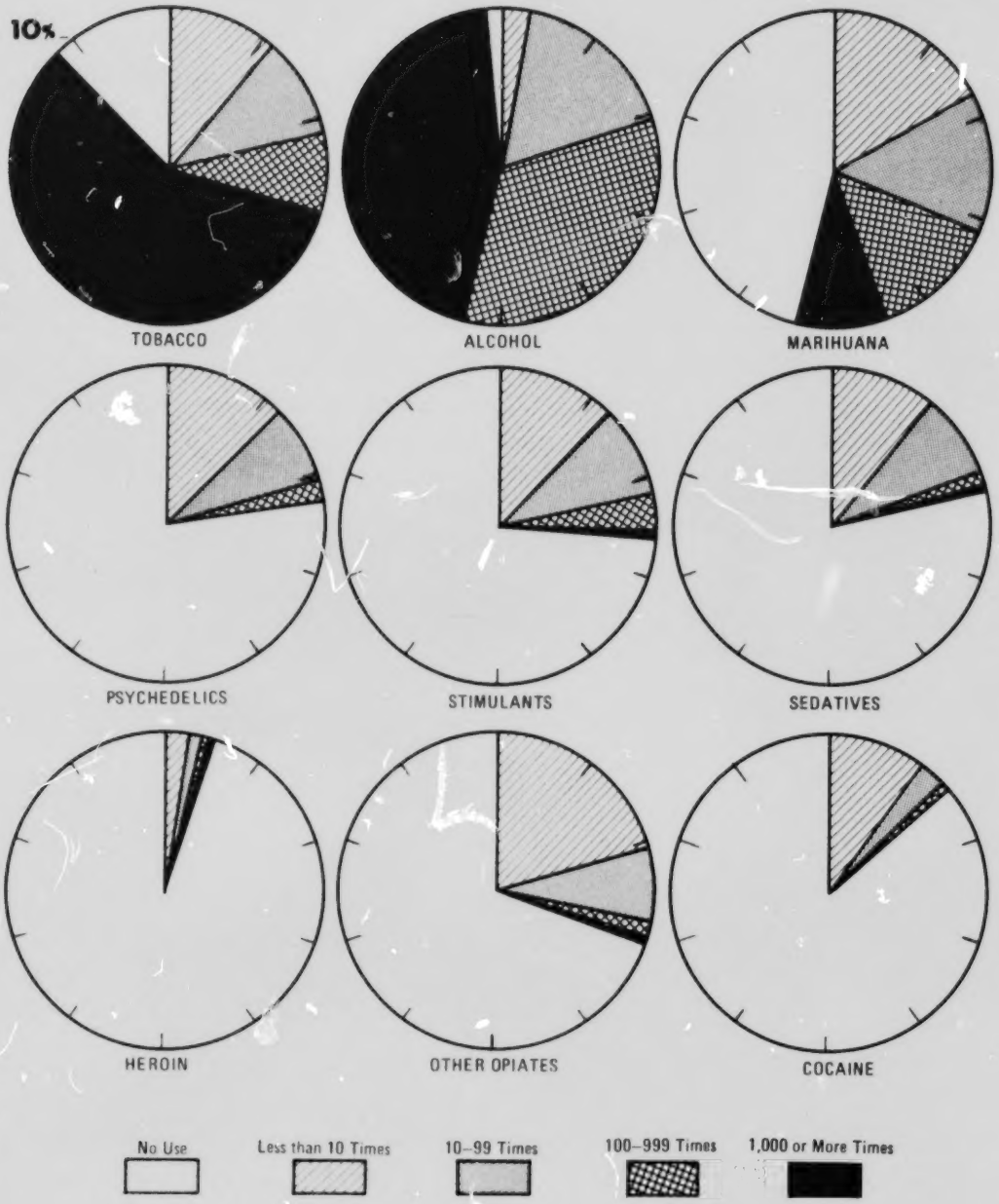
The National Institute on Drug Abuse publishes this landmark study with particular pride. Young mens' drug use has been examined in other nationwide studies, but none before has captured the most critical population and period of use.

In the late 1960's nonmedical drug use increased nationally in a great, unprecedented surge. The Nation is still trying to deal with this new, higher level of drug use and to understand why it occurred. The young men contacted in this study were the population on the cutting edge of this dramatic change. This documentation of their experiences is an important piece of social history. Not only will this new knowledge help us understand a very puzzling and important social change in America, but it also offers clues to other nations which are only now beginning to recognize the global implications of these changing patterns of drug use.

O'Donnell and his associates captured the right group at the right time. They also managed to collect an unusually rich array of information. This first report is an encyclopedia of contemporary American drug use. The data provide many possibilities for further analysis. Thus, while we work out the implications of this comprehensive and detailed first report, we can look forward to further understanding from continued mining of its rich data base.

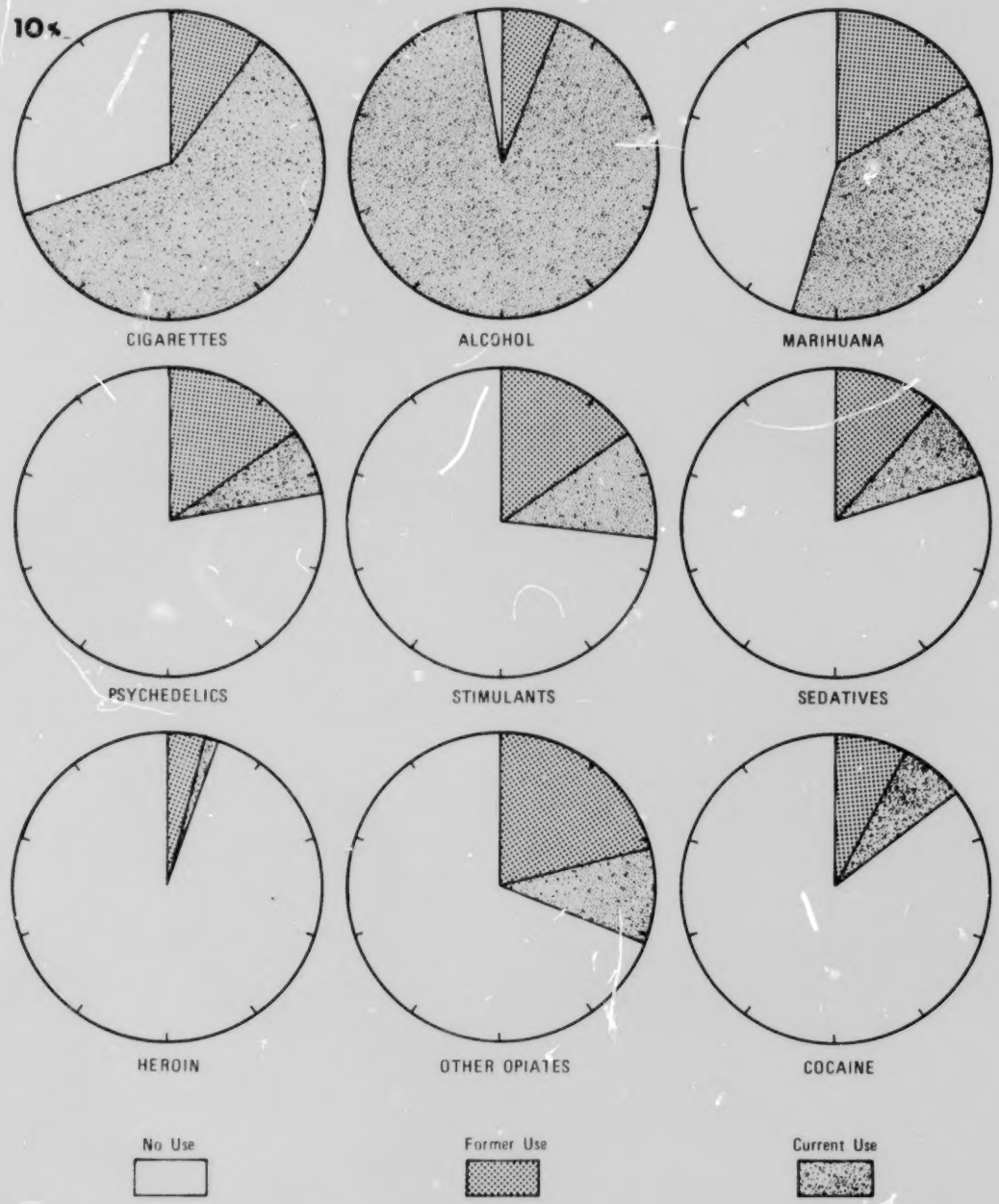
Robert L. DuPont, M.D.
Director
National Institute on Drug Abuse

LIFETIME USE



See Table 2.1, p. 13

CURRENT USE



See Table 3.1, p. 34

ACKNOWLEDGMENTS

A study of this scale and precedent, to which so many contributed so much so unstintingly, makes adequate acknowledgment impossible. Our great thanks to those at each stage from conception onward who gave advice, review and support. Special appreciation is owed to Dr. David Nurco, who was primarily responsible for the contacts with Selective Service to obtain the sample; to Lawrence G. Grossman, Warden of the Federal Correctional Institution, Lexington, Kentucky, for arrangements so that inmates could be interviewed for several of the pretests; to Dr. Ira Cisin, Professor of Sociology at George Washington University, for crucial advice in the design and carrying out of the study.

The tasks of recruiting, training and supervising interviewers, and of data management, would have been too great for the resources available to the investigators. An experienced survey organization was needed, and Temple University's Institute for Survey Research, in Philadelphia, was selected. Under the overall direction of Dr. Leonard A. LoSciuto, Director of the Institute, data collection and reduction involved the efforts of the entire permanent staff of 138 interviewers. The largest debt is owed, of course, to the interviewers, who with interest, perseverance and courage performed the difficult task of locating respondents, persuading them of the importance of the study and conducting the lengthy and sometimes difficult interviews.

Another contract was made with the University of California, Berkeley, to share in the design and conduct of the study. Dr. Don Cahalan guided the work at Berkeley and made important contributions throughout the study. Susan Sheffield was active in planning the study and data collection, particularly in the design and pretest of the interview schedule.

Finally, thanks are owed to many who cannot be named, the students, prisoners, union members and others who were interviewed in the pretests and above all to the respondents, whose cooperation made the study possible.

SUMMARY

1. The best estimates of use, among men who were 20 to 30 years old in 1974, are:

	Lifetime Use (Any use to time of interview)	Current Use (Any use in 1974 or 1975)
Cigarettes	70%	60%
Alcohol	97%	92%
Marihuana	55%	38%
Psychedelics	22%	7%
Stimulants	27%	12%
Sedatives	20%	9%
Heroin	6%	2%
Opiates	31%	10%
Cocaine	14%	7%

2. For most drugs, half or more of the users used the drug less than 10 times. While use was not under medical direction, some use of the stimulants, sedatives and especially the opiates is best seen as quasi-medical.

3. The data suggest a possible decline in use of cigarettes. Such use has been less common among the younger men (slightly over 60 percent of them have used cigarettes) than among the older men (about 75 percent).

4. The peak periods of incidence (new cases of use) were 1968-72 or 1969-73 for all drugs except alcohol. This is partly due to the restricted age range in the sample. Contributing to the drug epidemic of the late 1960s were the facts that:

   a) larger proportions of men in the younger cohorts than in the older cohorts used all drugs, except alcohol and tobacco

   b) these younger cohorts were larger in number

   c) the median age at onset of use was lower in the younger than in the older cohorts

   In addition, there is some suggestion in the data that when the use of drugs became more widespread in the younger cohorts, more men in older cohorts experimented with the drugs than would have been expected to do so.

5. Differences between blacks and whites in drug use seem to be diminishing. Among whites there is a strong inverse relation between age and use for all drugs except tobacco and alcohol; more of the younger men have used the drugs. This is not true for blacks; smaller proportions of the younger than the older blacks have used the drugs. In the older cohorts, the percentages of users were higher for blacks than whites for most drugs, but in the younger cohorts the differences were negligible.

6. There is no indication of any recent decline in the annual prevalence of use of any drug, with the possible exception of psychedelics. This means that there is no basis to suggest that the drug epidemic has ended; indeed, for several drugs, notably cocaine, the data are consistent with a continuing increase in use.

7. Veterans, whether they served only in the United States, overseas in places other than Vietnam, or in Vietnam, show no higher rates of current drug use than nonveterans. For the sample as a whole, their rates of lifetime use are not significantly different from those of nonveterans, except that marihuana and heroin use was higher in a few of the eleven cohorts.

8. Use of any of the nine drug classes is associated with use of all the others. If tobacco is excluded, alcohol and marihuana were almost always first and second in the time order in which drugs were first used, and use of other drugs was rare if alcohol and marihuana had not been used.

9. Reported involvement in criminal behavior varies directly with drug use, as do arrests, appearances in juvenile courts, convictions and prison sentences.

10. Less than 3 percent of the sample reported treatment for drug use. The largest number reporting treatment was for alcohol use but this was a minute fraction of the alcohol users. The next largest number reported treatment for heroin use; they constituted 14 percent of all heroin users. One-third or more of the men who used heroin most extensively were treated.

11. Many variables are found to be associated with both lifetime and current drug use. Use tends to be higher:

    a) the larger the city in which men lived to age 18

    b) among the unemployed, or part-time employees

    c) the less conventional men are, in terms of a variety of indicators of conventionality, including marital history, current living arrangements, and expressed attitudes

    d) the lower the educational level achieved

    e) among men who have entered college and report the social sciences, fine arts and humanities as their college major.

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1 Introduction

This is a preliminary report on a study of the nonmedical use of psychoactive drugs among young men in the United States. The data were collected from October, 1974, to May, 1975, by interviews with 2,510 men from an original sample of 3,024. The sample was selected by standard sampling procedures to be representative of all men in the general population who were 20 to 30 years old, inclusively, in 1974. This report is based on the 2,510 completed interviews, but it does not include a complete analysis of the data. Its aim is to make the major findings of the study available quickly to policy makers and other researchers. Some questions of importance are ignored or treated superficially. Further analyses will be completed and additional reports will be published later.

One of the consistent findings produced in numerous follow-up studies of persons treated for addiction to heroin and other opiates has been that nearly all of the ex-addicts relapse within a short period of time. Then, in 1972, the initial report of Robins' study of Vietnam veterans was released. In Vietnam, 29 percent of Robins' sample of enlisted men used narcotics (opium and heroin were the only two widely available) a total of more than 10 times and more than once a week; further, 20 percent of the men reported that they had been addicted to narcotics in Vietnam. However, in interviews with the men some eight to twelve months after their return to the United States, only one percent indicated that they had been readdicted to opiates. Robins' investigation showed that relapse was not inevitable.

One explanation for the discordant findings hinges on the fact that all of the earlier studies were based on samples of treated addicts. Persons who sought treatment or were placed in treatment programs by the courts were not a representative sample of opiate users; apparently they were the residue of that population after repeated filtering operations had removed all who gave up the use of opiates fairly easily. While the Vietnam veterans did not constitute a random sample of young American men, they were more representative of American youth than any sample of treated heroin users. Thus, one implication was that the widely held belief about the high probability of relapse was not necessarily true for heroin users in general.

Consistent with Robins' findings is the existence of persons who have used opiates and become addicted to them, both through self-administration and in medical treatment, but who subsequently quit using the drugs without treatment or with only minimal treatment for withdrawal symptoms. Unfortunately, estimates of the number of such individuals have not been available.

The view that ideas derived from treatment populations may be erroneous has been suggested by investigations in the area of alcoholism. For a number of years, studies of alcoholics were confined to persons in treatment for alcoholism or Skid Row populations. As a result, the image of the typical alcoholic was that of a homeless derelict. When studies were conducted on alcohol use in the general population, sizable numbers of persons who were married and employed were found to have serious drinking problems. In short, many of the older ideas about alcoholics had to be discarded.

These developments strongly suggested that a study of drug use in the general population might increase knowledge appreciably; such a study was discussed by the staff of the Special Action Office for Drug Abuse Prevention

and sociologists in the Department of Sociology, University of Kentucky, and the School of Public Health, University of California, Berkeley. This led to a grant application, and in June, 1973, a grant was awarded to the University of Kentucky. A contract was established with the University of California to share in the design and execution of the study, and later the Institute for Survey Research, Temple University, was selected to collect and to edit the data. The second year of the study was funded by a grant from the National Institute for Drug Abuse (Grant No. DA-01121).

RESEARCH OBJECTIVES

The study was to be nationwide and restricted to young men. The latter stipulation was based, in part, on the idea introduced in initial discussions that a sample might be drawn from Selective Service registrants. However, the primary reason for this restriction was that funds were available for a study based on a sample of approximately 3,000 persons. Some forms of drug use are relatively rare, and for these drugs, estimates would have to be based on small numbers, for example, the percentage of respondents who had used heroin. If the study were restricted to young men, the segment of the population most likely to have used drugs, the number of users might be sufficiently large to provide reasonably precise estimates. If older men or women were included, the number of drug users would be limited and might be too small to permit the derivation of stable estimates.

The study was conceived in accordance with three broad principles. No previous drug study combines all of them.

(a) The study would be conducted with a sample representative of the general population, rather than of clinical or other special populations.

(b) All of the commonly used psychoactive drugs would be studied in a standard framework to allow comparisons between drugs in patterns and correlates of use.

(c) In addition, detailed information on the correlates and consequences of drug use, as well as the respondent's life situation, would be collected. These data could be linked to the respondents' patterns of drug use.

In these terms the study was concerned with the natural history of drug use. Although this term has varying connotations, they all share a concern with the patterning of behavior and events in time. In previous studies drug use has usually been examined in terms of "ever" use or current usage. In the present study, data were to be collected on the respondents' history of use.

Given the restriction of the sample to young men and the limitation on its size imposed by the budget, four areas of focus were listed in the grant application:

1. The Natural History of Nonmedical Drug Use. The first goal was to obtain retrospective histories of use of nine classes of drugs (tobacco, alcohol, marihuana, psychedelics, stimulants, sedative-hypnotics, heroin, other opiates and cocaine) including (a) periods of experimentation, (b) regular use, (c) cessation and resumption of use, and (d) patterns of substitution, sequence, and simultaneous use of drugs. Of special interest to the researchers were instances of cessation of use, whether or not these were associated with treatment, and if so, with what types of treatment.

2. Estimates of Incidence and Prevalence. The second focus was to be on age-cohort differences with particular emphasis on (a) current use (within the past year), (b) use within any given year (1957-1974), and (c) use at a given age for all respondents, for example, use at age 18.

3. An Examination of the Question of a Drug Epidemic. Attention was also to be focused on the belief that an epidemic of drug use occurred in the late 1960s and, if such an epidemic occurred, to chart its course across the drug classes. Data were to be obtained on differences in the onset, length and decline of the epidemic by region, race and other demographic variables.

4. Exploration of the Correlates and Determinants of Drug Use. With drug use as a dependent variable, the fourth focus of this study was to determine the correlates and possible determinants of differences in use, especially demographic, life style, life stage, associational and attitudinal variables.

Each of these areas of focus implied different and to some extent contradictory considerations in the research design. For example, with a narrow age range, the estimates of the incidence and prevalence of drug use would be more precise, but a narrow age range would restrict generalizations. On the other hand, a wide age range would give a better chance of bracketing the occurrence of a drug epidemic, at the cost of less

precise estimates of incidence and prevalence.

It was decided to select as the target population the twelve-year range of men who would be between 19 and 30 years of age at the time of the interview. Younger men were excluded to avoid any need to obtain parental consent to conduct interviews. Older men were not included because earlier studies suggested that drug use would be relatively infrequent among men over 30 years of age. Many studies have shown that the teen-age years are the ones of greatest vulnerability to drug use. Hence, the older men in the sample would have passed the vulnerable years before the presumed epidemic began in the mid-1960s, while the younger men would not have. It was concluded that an age range of approximately 12 years would permit comparisons of incidence under differing conditions of prevalence of use.

Restriction of the age range left another problem unresolved. Among others, Abelson (1972) has suggested that the number of men between 19 and 30 who would report having used heroin would be too small to provide adequate information about the natural history of such use. Stratification of the sample to increase the probability of including heroin users was considered, but this approach was rejected for a number of reasons. While areas of high use could be identified in a number of cities, different criteria would have to be used from city to city; consequently, it was difficult to establish an acceptable basis for stratification. Further, with the exception of New York City, most areas of high heroin use were distinctive only in relative, not absolute terms. To obtain a sufficient number of respondents who had used heroin, a sizable part of the sample would have to be assigned to such high-use areas, and the effect would be to limit the precision of estimates for use of all other drugs in other areas.

Consequently, a second small sample was selected from the high-use areas of New York, for a separate study. This study will not be described in this report, except where the early findings in New York are relevant to the credibility of the data obtained in the nationwide survey.

METHODOLOGY

The Sample

Almost all nationwide samples are stratified probability samples, with areas of the country selected first, then households within the selected areas, and finally individuals from the selected households. A household sample seemed to be a poor choice for this study because it is precisely its target population, young men, who are least likely to be found in households. Hundreds of thousands of young men would be away from home, at college, or in the armed forces, with lesser but not negligible numbers in prisons or other institutions. Even the Census misses large numbers of persons, and it is thought that these are mostly young men, especially those who belong to minority groups residing in large metropolitan areas. This might not matter greatly in some investigations, but this study was of drug use, and there were reasons to believe that those young men who were least likely to be included in a household sample were most likely to have histories of drug use.

What is most desirable for the selection of a sample is a list of the individuals in the target population. Such a list exists or could be constructed from information available in a number of governmental agencies such as the Census Bureau, Social Security Administration, the Department of Defense, the Veterans Administration and the Selective Service System. The most reliable source for this sample was the Selective Service System.

Since 1940, almost all young men in the United States have been required by law to register with Selective Service when they reach the age of 18. In actual practice, there are two groups whose names do not appear in Selective Service files. The first comprises those men who enlist in one of the services before the age of 18 and who remain in the service beyond the age of 26. If released before age 26, they were obliged to register; consequently, it is only those who reenlist who were never obliged to register. The number in this group is so small that it can safely be neglected.

The second group consists of those young men who fail to obey the law; they simply do not register and are not detected in this failure. It is, of course, impossible to know exactly how many such men there are, but Selective Service officials were able to demonstrate convincingly that their number is small, almost certainly less than five percent of all young men. This conclusion is based on studies in which their statistics were checked against census data, Bureau of Vital Statistics compilations, and lists of high school graduates and automobile drivers' licenses. One of the major factors assuring complete lists was citizen involvement. Each local board is composed of uncompensated volunteers drawn from the geographical area served by the board to assure familiarity with the neighborhood environment.

The age range of the sample could readily be translated into registration years. Men aged 19 to 30 in early 1974 (when it was expected that interviewing would start) would have registered in the years 1962 through 1973. The 1973 registrations were eliminated because in that year there was a change in policy, and no men were drafted into the services. This did not remove the obligation to register, but there was considerable confusion about that, and for 1973 the number of men failing to register was higher than usual.

These registration years included the years of the Vietnam war, when there was opposition to the draft among young men, and it seems reasonable to assume that the proportion of men who failed to register must have increased in those years. Once again, there is neither a basis to estimate the size of the increase, nor to reject the estimate that it was small. Even among the men most opposed to the war, the usual response does not seem to have been failure to register. Rather, almost all young men continued to register, and opponents of the war sought deferments or, in some cases, left the country when it appeared that they were about to be called for induction. This meant that their names appeared in the Selective Service records.

For this study, then, Selective Service information seemed the ideal source for sample selection. This is not to claim that their list of young men was 100 percent complete, but it did not seem to fall far short of that, and it certainly had no rivals for completeness. Selective Service is authorized by law to release data for research purposes, and Mr. Byron V. Pepitone, Director of Selective Service, arranged to have only staff members of Local Boards draw the sample by procedures established by the investigators. He made the sample available to the Special Action Office, which in turn made it available to the research team. This did not involve the release of any confidential information from Selective Service files, such as classifications or other Board actions.

The sample may be described as a multi-stage stratified random sample. The first step had been taken by Temple University's Institute for Survey Research before this study was designed. Their sampling frame had been constructed as follows. The approximately 3,000 counties in the United States were divided into two groups. The first included Standard Metropolitan Statistical Areas (SMSAs) or combinations of contiguous SMSAs in which the total population was 1.8 million or more. These 18 areas included 40 percent of the projected national population for the 1970-80 decade. For administrative purposes they were divided into 40 primary sampling units, and these were included in the frame with a probability of 1.0.

The remaining counties were clustered into primary sampling units. Individual SMSAs were recognized as separate units, and non-SMSA counties were clustered into units of two or more contiguous counties. These units were grouped into 30 strata, each with a projected mid-decade population of 4.2 million. Fifteen were SMSA units, and 15 were non-SMSA units. Within these groupings, primary sampling units were stratified on the basis of region, growth rate, industrial structure and, in the South, racial composition. Within each stratum, two units were selected with a probability proportional to the size of the projected mid-decade population. Thus, in addition to the 18 areas or 40 primary sampling units selected with certainty, 60 units were selected with varying probabilities.

All units and areas were definable in terms of counties (with minor exceptions in New England), and the basic element in the Selective Service System was the county. In general, the pattern was to have one Local Board per county, with the exceptions that in metropolitan areas there could be many boards in one county, and in a few rural areas one board served several counties. By random procedures, two boards were selected in each of the 100 primary sampling units, and then, within each of the registration years, individuals were selected from the lists maintained by these boards. Each step made the probability of selection dependent on the number of men in the area, and these probabilities cancelled each other, so the net result was an equal probability sample. In less technical language, an area with many men had a better chance to be selected than an area with few men, but within areas selected the men from less populous areas had a greater chance to be selected than men from areas with a large population. Thus, it can be said that all young men in the United States had an equal chance to be selected. Since all steps in the procedure were random, the eventual sample--3,024--should be representative of all young men in the continental United States. Alaska and Hawaii were excluded because of the added costs field work in these states would involve.

The Interview Schedule

The interview schedule is too long to be included as part of this report. Specific items will be described as the data are analyzed in the body of the report. Researchers

who need to see the full schedule can obtain a copy by writing to any of the authors.

The core of the interview, given its purposes, had to be questions about past and current drug use. A recurrent problem in studies such as this is the number of drugs or drug classes to include: with a larger number, more details are obtained, but more time is required to obtain them. The decision was made to focus on nine: tobacco, alcohol, cannabis, psychedelics, stimulants, sedative-hypnotics, heroin, other opiates and cocaine.

The same questions were to be asked about the history of use of each of the drugs, or classes of drugs, but these had to be reduced to a minimum to save time and to avoid boredom, which was a problem in earlier, longer versions of the schedule. Pretests also showed that some questions were irrelevant or inappropriate when asked about a drug that had been used only a few times. The solution was a series of screening questions to determine which drugs had been used and how often; these were followed by detailed questions only for the drugs that had been used 10 times or more.

In addition to the series of items on drug use, areas covered in the interview included residence to age 18, occupation and education of parents, religion, education, brief occupational history, marital history, military service and criminal behavior. Finally, the interview included two short self-administered questionnaires to obtain factual data and some indicators of attitudes and values.

Because of delays in starting the field work, there was more time for pretesting than is usual. There was an extensive period of informal pretesting by the investigators, their assistants and students as the schedule went through numerous versions, sometimes on as few as six to ten men, sometimes on as many as 30 to 60. Efforts were made to do pretests on as wide a range of men as one would expect to find in a national sample. Student volunteers, both users and nonusers of drugs, were used. To pretest on heavy users, interviews were done through street contacts in Berkeley and with prisoners in Lexington. To include blue-collar workers, interviews were arranged in Lexington with members of a union who were on strike. These pretests were done over a period of several months, and no record was kept of their number, but they totalled about 200. With the exception of the student volunteers, all of the men interviewed were paid for their time, usually five dollars per interview.

Next came formal pretests, with four experienced interviewers in Philadelphia, and fifteen, some experienced and some not, in New York City. Interviewees were selected by household survey techniques. Each of these steps led to revisions in the format, question content and wording, as well as to elimination of many questions. A final pretest in Philadelphia was conducted by three experienced interviewers and several of the Temple staff members who would be supervising field work. The interviewees were selected from Selective Service registrants not included in the sample. In all of the formal pretests interviewees were paid $15 per interview, as was planned in the study. Thus, all aspects were pretested before the field work began.

Data Collection

A total of slightly more than 160 interviewers, most with experience in other studies, were recruited; because of the subject matter of this study, a special effort was made to obtain males, young persons and blacks, but the modal interviewer was a middle-aged, middle-class white woman. The effects that interviewer characteristics may have had on the data collected will be analyzed in later reports.

Interviewers were brought to Temple's Philadelphia office for four-day training sessions, and five separate sessions were conducted to keep the groups reasonably small. About one and a half days were spent on principles of interviewing and the recording of responses; an equal amount of time was spent reviewing and practicing on the schedule used in this study. The remainder of the time was spent on procedures for locating research subjects, the administrative procedures for mailing of reports, and similar matters.

Training continued even after the formal sessions. On their return home, interviewers completed one interview, which was returned and edited quickly. Only after at least one interview had been completed satisfactorily was an interviewer permitted to begin on the list of cases assigned to him or her. Even then editing continued to be educational, and requests were sent for answers to questions which had been skipped incorrectly, or had not been completed.

Under the close supervision of experienced data processors, the editing and coding were done as the interviews were returned. In the early weeks of data collection, special attention was paid to items which seemed to be difficult for a number of interviewers, and memoranda were prepared to give more detailed instructions.

Before the field work began, changes of address were requested from the post office, and letters were sent to subjects to update the addresses obtained from Selective Service records, some of which were then more than ten years old. The mobility of young men between the ages of 18 and 30 is high, and the work involved in obtaining current addresses was greater than had been anticipated. Much of it had to be done in the field by the interviewers themselves, with numerous reassignments of cases as changes of address were discovered. Toward the end of the data-collection period, when most interviews had been completed and the remaining subjects were those difficult to locate, as many as eight staff members in the central office of the Institute for Survey Research spent weeks making telephone calls and writing letters to pursue all available leads.

Temple's experience was that different interviewers found different methods to be effective in securing interviews; as a result, no general procedure was required of all interviewers. The most frequent approach, however, was to telephone, in order to make an appointment for the interview; by telephone the study was described only in general terms, but the content and purpose of the interview were described in some detail when the interviewer met the subject.

The men interviewed were paid a flat fee of $15 for the time they spent in the interview. This was paid in the form of a money order at the end of the interview. Since there was no variation in this procedure, there is no way to measure its effect. The interviewers believed that the majority of the subjects would have been willing to be interviewed without any payment, but that a sizable minority agreed to the interview solely or mainly because of it. Thirty-six men in the sample were deceased; of the remaining 2,988, 84 percent were interviewed, and interviews were refused by only 6 percent of those who could be located. Without payments, it may be guessed that the completion rate might have been approximately 60 to 65 percent.

CONFIDENTIALITY OF INFORMATION

The Comprehensive Drug Abuse Prevention and Control Act of 1970 authorized the Attorney General to make a grant of confidentiality in drug research. On October 16, 1973, the principal investigator was given the grant, which covered all who worked with him on the project. It provided authority

> to withhold the names and other identifying characteristics of persons who are the subjects of research conducted pursuant to and in conformity with this research project. You may not be compelled in any Federal, State or local civil, criminal, administrative, legislative, or other proceeding to identify the subjects of such research.

This removed fear of any legal compulsion to divulge information, but the more probable sources of a breach in confidentiality lie in the research staff who handle the data, and steps were taken to minimize that risk. One principle was to reduce to the minimum the number of staff members who had access to both the interview data and the identity of the man who had provided it. It was necessary to keep these together until the interview had been edited, and until the Institute staff made a validity check with the respondent to determine that the interview had been done. Only a few of the highly trusted staff of the Institute had access to the data during this period, and the identifying information was separated from the rest of the schedule as soon as possible. From that point on no one, with one exception, could match data with the persons to whom they applied. The exception was the principal investigator, who still maintains a master list of the names of respondents and their case numbers in order to plan a second stage of interviewing for the sample as a whole or some sub-sample of it, if it should be desirable.

This left what is always the major danger of a breach in confidentiality, the interviewers themselves, as essentially the only persons in the project who would know both the identity of the individual and the data he furnished. There is no absolutely certain way to prevent breaches by interviewers, but the practical steps available were taken.

First, of course, was care in the selection of interviewers. Second, in the training their responsibilities were emphasized. They were advised that the less they talked about interviews the better. Realistically, it is difficult for a person not to tell his or her spouse or friends about interesting experiences; consequently, heavy emphasis was placed on never naming or otherwise identifying a respondent. One of the reasons why the interviewers were urged to arrange for privacy in the interviews was to avoid having a member of the family overhear anything he said.

There was little chance that a person would be assigned to interview a man known to him or her, but the interviewers were instructed that if this happened the interview was not to be completed, but was to be returned for reassignment. Further, if a respondent lived

in the interviewer's neighborhood so that later social contact was possible, the situation was to be discussed with the field work supervisor before the interview was attempted.

No breaches of confidentiality are known to have occurred, and now none can occur. The validation letters returned by the respondents indicate strongly that they perceived the interviewers as professionals and had no fear that confidential information might be disclosed.

CREDIBILITY OF THE DATA

Because the data are based on the answers the respondents provided in personal interviews, an important question arises, namely, how much reliance can be placed on their answers? The possibility clearly exists that when respondents are asked about deviant and socially disapproved behavior, they may exaggerate, minimize or deny what they actually did.

Exaggeration has been feared mainly in questionnaire studies of school samples, especially when questionnaires are administered to groups of students. In interview studies the primary concern of investigators has been with the possibility that respondents may minimize or deny behavior. Two of the methods employed to assess this possibility can be reported at this point.

Since the study was focused on drug use, the major question relates to the chance that drug use would be denied. One approach is to examine the findings in the second sample in New York City. That sample was drawn from the areas in Manhattan where heroin use was known to be high during the 1960s; as many as 23 percent of the total population, aged 15-44, in some areas have been reported as drug abusers, and most of these as heroin users. The lowest rates reported for the areas from which the sample was selected were 3 to 6 percent.

Since more males than females and more younger than older males can be expected to have used most drugs, the New York City sample should show fairly high rates of drug use if men did not deny use that had actually occurred. Among the first 140 men interviewed in the New York City sample, the expected high rates of use were observed. The percentages of men who reported having used each drug or drug class were: tobacco, 84; alcohol, 99; marihuana, 74; psychedelics, 25; stimulants, 28; sedatives, 24; heroin, 22; opiates, 36; and cocaine, 39.

Second, the names of 100 men known to have used drugs were obtained from a variety of sources--some from treatment agencies, some from drug arrest records and some from among those who had tested positive for opiates in Vietnam. Information was not supplied about individual drug histories; thus, it is not known exactly how many had used heroin or other drugs, nor how many had been arrested, but it is known that the percentages should be high. The names of these men were added to the sample, and they were in no way distinguishable from the other men in the sample; consequently, any difference in reported drug use could not be due to differential handling by interviewers. Only 52 of these men were interviewed; in the last months of field work, when all efforts were focused on obtaining as high a completion rate as possible in the national sample, no further attempts were made to locate and interview the other 48 men.

Of the 52 men interviewed, 98 percent said they had used tobacco and alcohol; 89 percent had used marihuana. The percentages who reported use of the remaining drugs were: psychedelics, 60; stimulants, 64; sedatives, 62; heroin, 81; opiates, 62; and cocaine, 73. In addition, 71 percent said they had had trouble with the law because of their drug use, most frequently for heroin use and next most often for marihuana use. Eighty-one percent admitted they had an arrest record. Seventy-three percent had used a needle to inject drugs, and 54 percent had been treated for drug use. In both of these tests, then, the data furnished by respondents were of the order to be expected if they were telling the truth; there was no evidence of wholesale denial of drug use.

Although it has not been possible to complete them as yet, further checks are possible. Urine specimens were requested from the respondents; they were tested for the presence of drugs. However, only about 70 percent of the men furnished a urine specimen. It is not clear how useful these will be, but if, as expected, some interviewers obtained specimens from almost 100 percent of their assigned respondents, it will be possible to check the laboratory findings against the statements of the men about their drug use within the preceding 24 to 48 hours.

The interviewers rated each respondent on his truthfulness, and the data will be analyzed according to these ratings. In addition, data will be examined to see if responses vary, or to what extent they vary, with interviewer characteristics, including use of drugs by the interviewers and their attitudes toward drug use.

Another way to check the credibility of the responses is to compare the findings with those of other studies. This will be done more rigorously in later, more detailed reports, but it can be said that the extent of drug use found in this study equals or exceeds what would be expected from comparable studies.

Those who have done similar studies will agree that the most persuasive evidence of credibility, though the least quantifiable, is found in the internal consistency of the responses. This includes not only the common procedure of asking the same question in several places, or in several forms, but in expected relationships among variables. Thus, one expects to find more criminal behavior among the users of drugs who obtained them only through illegal channels than among others. The analysts have been impressed by the degree of such consistency found in the analysis completed to this time.

In summary, then, additional checks on the credibility of the data are possible, and they will be made. On the basis of the ones available, there does not appear to be any particular reason to question the credibility of the data analyzed in the following chapters. This statement is made with respect to the possibility of deliberately false answers to questions. The reader is reminded that there are other sources of error in the retrospective reporting of data, such as failures of memory. Some of the men in the sample were reporting behavior as much as 20 years before the date of the interview, and it would not be surprising that, when a respondent reported his first use of alcohol as occurring at age 13, the correct age was actually 12 or 14.

COMPARISON OF INTERVIEWED SAMPLE WITH MEN NOT INTERVIEWED, AND WITH U.S. POPULATION

It will be recalled that the sampling design produced a sample of 3,024 men. Of these, 2,510 were interviewed; 36 had died; 7 were located but were incompetent and incapable of being interviewed; 174 were located but refused the interview; in 17 additional cases informants refused to give information on the subjects' location; 263 men had not been located at the time it became necessary to terminate the field work; and 17 men had known addresses outside of the United States, but these became known after the overseas trips were completed, or the men were not available when these trips were made.

The reasons why men could not be located were varied. Young men are probably the most geographically mobile group in the population, and many had moved from the places where they had originally registered with Selective Service. Addresses were up to 12 years old when attempts at tracing them began. Urban development and highway construction had wiped out whole areas in some cities; as a result, the old neighborhood no longer existed, and there was no one available to furnish leads. In a few cases the available information was completely inadequate for tracing purposes; local draft boards had been vandalized, records destroyed, and all that was known was a name and date of birth. In a few other cases, the man's address was known, but he was not available on the only trip it was economically feasible to make to his area. One, for example, was snowbound in a camp on the Alaska pipeline; another was a bush pilot missionary in North Africa, who was away from his base when the interviewer passed through it.

It is quite understandable, therefore, that the rate of completed interviews was not higher, and field work was terminated only when the investigators were satisfied that even a sizable further expenditure of time and money would produce only a few additional interviews.

Subtraction of the 36 who had died and the 7 who were incapable of being interviewed leaves 2,981 men who could have been interviewed and 471 (15.8 percent) of them were not interviewed. It is necessary, therefore, to examine the extent to which 2,510 interviewed men are representative of the target population.

Because of the confidentiality of the Selective Service records, only information that would help locate the sample subjects was made available to the researchers. There are, therefore, only two variables on which the missing 471 men can be compared with the 2,510 who were interviewed. These are year of birth and place of residence at the time of registration with Selective Service.

The data on year of birth are presented in Table 1.1. It should be noted that four respondents gave dates of birth outside the 1944-54 range. Two, born in 1941 and 1942, are included in the 1944 cohort; these are presumably men who registered later than when they were legally required to register and gave false birthdates to conceal that fact. Two more, born in 1955 and 1956, are included in the 1954 cohort; one gave a false age in order to enlist in the military early; it is not known why the other man gave Selective Service a different date of birth than the one he gave to the interviewer. These four cases represent such an exceedingly small

Table 1.1. Distribution of the Total Sample, Interviewed Men and Men Not Interviewed, and of the Corresponding U.S. Male Population, by Year of Birth

YEAR OF BIRTH	Total Sample[1] (n)	Percent	Interviewed (n)	Percent	Not Interviewed (n)	Percent	U.S. Male Pop.[2] Percent
1944	228	8	174	7	54	11	7
45	219	7	171	7	48	10	7
46	239	8	196	8	43	9	9
47	315	11	254	10	61	13	9
48	266	9	223	9	43	9	9
49	266	9	215	9	51	11	9
1950	274	9	234	9	40	8	9
51	278	9	245	10	33	7	9
52	300	10	261	10	39	8	10
53	281	9	247	10	34	7	10
54	315	11	290	12	25	5	10
Total	2981	100	2510	101	471	98	98

[1]Total excludes 36 deceased and 7 incompetent men.

[2]From Table 156, p. 1-354, United States Summary, PC (1) - 1D, Census of Population, 1960.

percentage of the total number of interviewed men, or of the cohorts to which they are assigned, that their inclusion will not affect the analysis presented in this or later reports.

Two comparisons should be made in the table. First, the distribution of the total sample should be compared with the total male population. For this purpose the 1960 Census data for males 5 to 16 years old were used to provide an estimate of the size of the target population before the men registered with Selective Service. While only 6 of the percentages are identical in the two columns, the match is close. The largest difference is two percentage points for the 1947 cohort, and this is exaggerated by rounding; with another decimal the difference is 1.2 (10.6 and 9.4). The sampling procedure produced a sample truly representative of the total population with respect to year of birth.

The other comparison that should be made is between those men who were interviewed and those who were not. A glance is sufficient to show that it was the older men who were less likely to be interviewed. To the extent that age is related to drug use, or to other variables examined in this report, this could introduce bias into the findings; this must be taken into account in generalizing from the findings obtained in the interviews to the population of young men.

The same kind of comparison can be made in Panel A of Table 1.2, which shows the distribution of the sample by region of the United States, as of the time of registration with Selective Service. Data were not located on the distribution of the U.S. male population for men exactly comparable with the Selective Service registrants, but because males who were 5 to 14 years old in 1960 could not differ greatly in geographical distribution, they are used for comparative purposes in the table.

First, it may be observed that the total

Table 1.2. Regional Distribution of the Sample, as of Dates of Registration and Interview

A. Distribution, as of Date of Registration, of the Sample, of Interviewed Men and Men Not Interviewed, and of U.S. Male Population, Age 5-14 in 1960[1] (Percentages)

	Total Sample (n)	Percent	Interviewed (n)	Percent	Not Interviewed (n)	Percent	Male Population, 5-14 in 1960[1]
Northeast	647	22	517	21	130	28	23
North Central	882	30	762	30	120	25	29
South	967	32	816	32	151	32	32
West	485	16	415	17	70	15	16
Total	2981	100	2510	100	471	100	100

B. Distribution, as of Date of Interview, of Interviewed Men, and of U.S. Male Population, Age 16-26 in 1970[2] (Percentages)

	Interviewed	Male Population 16-26 in 1970
Northeast	18	22
North Central	28	27
South	33	32
West	18	18
Outside	2	-
Total	99	99

[1]From Table 233, p. 1-618, United States Summary, PC (1)-1D, Census of Population, 1960.

[2]From Table 56, p. 1-282, United States Summary, Part 1, Section 1, Census of Population, 1970.

sample is almost perfectly representative of the population with respect to region of residence at age 18. Second, the men who were not interviewed were disproportionately from the Northeast--the rates of completed interviews were somewhat higher in the Western states and even higher in the North Central states. This, too, is a potential source of bias, but a small one; the distribution of the interviewed men does not differ greatly from that of the total population.

In Panel A the address as of age 18 is used, whereas in Panel B the address as of the time of interview is used to permit comparison with the 1970 Census. Because data by single years of age were available, comparisons can be made with exactly the same age group. The westward tilt of migration is observable in the difference between the distributions for the interviewed men between the two panels and between those for the entire population. There was a percentage point increase for the West in the population, and almost the same increase was observed among the interviewed men. Again, it is clearly men from the Northeast who are underrepresented by the interviewed men.

The only other variable on which the interviewed men can be compared with those who were not interviewed is the size of the city in which they lived at age 18. Because the missing men resided disproportionately in the larger cities, the data on city size also pertain to a potential source of bias. These data are presented in Chapter 4, and an attempt is made to estimate the effects of this bias.

For all other variables, data are available only for the men who were interviewed. A description of the sample in terms of these variables will be presented in later chapters in relation to drug use.

ORGANIZATION OF THE REPORT

This report is organized into thirteen chapters. In Chapters 2 and 3 data are presented regarding lifetime and current prevalence of drug use, as well as some correlates of use. In Chapter 4 these data are used to estimate the numbers of men, in the approximately 19,000,000 represented by the sample, who have used the various drugs.

The incidence (the number and percent who began use in each year) of drug use is examined in Chapter 5 to shed light on the presumed occurrence of a drug epidemic in the late 1960s.

Chapter 6 pertains to the contexts and motivations of use, and some drug-related attitudes and opinions of the men in the sample. Data are presented on the ways in which the men obtained drugs, the ways they used them, and the reasons given for using or not using the different drugs.

The consequences of drug use, the problems reported by users and the benefits they perceived are discussed in Chapter 7. Some of these data became available shortly before the deadline for completing this report; as a result this discussion is both tentative and incomplete.

In Chapter 8 the relation between drug use and criminal behavior is examined. The respondents gave information regarding ten specific offenses rather than all of the offenses they may have committed. Information about their contacts with the criminal justice system is also presented. The relation between drug use and crime is an extremely complex one, and months of further analysis will be needed to attempt answers to the questions of greatest practical and theoretical significance. This chapter must be read as only an initial exploration of a complex area.

Thus, the first eight chapters are concerned with the nine drug classes, and the correlates of use are examined with respect to each class separately. In Chapter 9 the question of multiple drug use is addressed; the time order in which the drugs were used and the associations between use of each drug and use of all others are examined. This approach is continued in Chapter 10 in which the development of a Total Drug Use index is presented. The TDU index gives a score for each respondent, taking into account which drugs he has used and the extent of his use. This index is then used to reexamine, in a more parsimonious way, many of the correlates of use noted in the earlier chapters, as well as to examine other correlates.

In the last three chapters specific questions of interest are examined. Data on the relation between military service and drug use are presented in Chapter 11. Relatively few men in the sample were ever treated for drug use, and their number is too small for detailed analysis, but the available data are presented in Chapter 12.

Finally, in Chapter 13 data on regional variations in drug use are presented. These data became available too late for detailed analysis, but this brief description is included because of widespread interest in regional differences.

CAVEATS

Before the data are presented, it is appropriate to repeat a caution noted earlier. Only a preliminary analysis of the data has been completed. The field work was not completed until May, 1975, and most of the data were not available until June; for some of the variables the data are not as yet available. Consequently, data are presented descriptively, and the analysis is based largely on percentage differences. More rigorous statistical analysis is needed, but it will require more time than was available for the preparation of this report.

Although data banks are never free of error, the writers are confident that the data on which this report is based are essentially free of coding error. There are undoubtedly some errors in the data that can be corrected as analysis continues. Finally, time has limited the number of relationships that could be examined. The interview schedule is rich in variables not yet examined, but these will be covered in subsequent reports.

In addition to these general cautions, a specific caution is in order. The sample was selected to be, and may safely be considered, representative of all young men in the United States. Most of the analysis, however, consists of comparison of one part of the sample with another, and there is no basis to assume that all of the parts are representative of the corresponding parts of the population. Specifically, the sample is really the sum of eleven independently selected random samples, one for men born in 1944, one for men born in 1945, and so on through 1954. Each of these is a representative sample, and when these birth cohorts are compared with each other, differences found between them will be real differences, allowing for sampling error.

The situation is different when whites are compared with blacks, or one region of the country with another. It is reasonable to assume that the whites in the sample are representative of whites in the population because they constitute 84 percent of the sample. However, the blacks may not be representative of all blacks in the population. Similarly, when the sample is divided into the four geographical regions, the four parts may or may not be representative of each of the regions. As one moves to smaller units, such as geographical divisions, states or cities, it becomes almost certain that the small parts of the sample are not representative of the small geographical units.

Caution must, therefore, be exercised in generalizing from parts of the sample to parts of the population of young men, even though one may generalize from the whole sample to the total population. The situation is closely analagous to the familiar polls of election years, which predict accurately who will be elected President, but furnish no basis to say what the vote will be in a specific city.

2 Lifetime Prevalence

Measures of lifetime prevalence (defined as any use in the person's lifetime) are crude, and they are presented only as an initial way of describing the respondents' experiences with drugs. Later in this chapter attention will be devoted to more refined measures reflecting the extent of use.

Before the data on use of the drug "classes" are presented, several comments about the classifications are necessary. First, the category labeled marihuana includes use of marihuana, hashish, and hashish oil. This class could be called cannabis, but the term marihuana was used in the interviews in reference to all three drugs, and this usage will be followed in this report. It does not include THC, which was counted in this study as a psychedelic. Second, while heroin is an opiate, there is sufficient interest in it to warrant treating it separately. Hence, the term opiates is used in reference to all opiates other than heroin. A simiiar rationale justifies separate treatment of cocaine.

In Table 2.1 data are presented on the use, at any time in the man's life, including use

Table 2.1. Lifetime Use and Total Number of Times the Drugs Were Used By Drug Classes (Percentages, n = 2510)

	No Use	Used	Less than 10 times	10-99 times	100-999 times	1,000 or more times
Tobacco	12	88	9	10	10	59
Alcohol	3	97	4	14	35	44
Marihuana	45	55	17	14	13	11
Psychedelics	78	22	12	8	2	*
Stimulants	73	27	12	10	4	1
Sedatives	80	20	10	7	2	1
Heroin	94	6	3	2	1	1
Opiates	69	31	20	9	2	1
Cocaine	86	14	9	4	1	*

*Less than half of one percent.

Table 2.2. Lifetime Use of the Drug Classes by Birth Cohort (Percentages)

Year of Birth	n	Cigarettes	Alcohol	Marihuana	Psychedelics	Stimulants	Sedatives	Heroin	Opiates	Cocaine
1944	174	79	98	39	5	15	11	2	24	3
45	171	75	99	34	9	19	15	1	25	5
46	196	73	97	44	13	19	14	6	23	10
47	254	75	98	49	16	23	15	4	29	10
48	223	63	96	57	20	30	19	5	28	12
49	215	73	98	56	18	28	19	4	29	12
1950	234	73	96	66	29	37	22	10	36	18
51	245	70	98	62	27	33	23	9	34	18
52	261	66	96	64	30	32	25	9	32	21
53	247	60	98	62	32	33	29	9	42	21
54	290	63	95	59	30	26	23	4	33	16
Total	2510	70	97	55	22	27	20	6	31	14

only a few times, of each of the drug classes. Alcohol ranks first, with 97 percent having used it. Tobacco is second, with 88 percent and marihuana third, with 55. Opiates rank fourth. Next in order are stimulants, psychedelics, sedatives, cocaine, and heroin.

It is also to be noted that the extent of use varied markedly. Most of the men in the sample who used tobacco at all used it more than a thousand times, and this is true for more than 40 percent of those who used alcohol. (The number of "times" a man used the drug refers to the occasions of use. One occasion could mean one alcoholic drink or many, one marihuana cigarette or many, and so on.) While marihuana was used by more than half of the sample, only 11 percent used it a thousand times or more, and for all other drugs, this frequency was reported by one percent or less of the sample. While drugs were used by many of the men, their use was often not extensive.

Birth Cohorts

The sample was selected from men who had registered with Selective Service in the years 1962 through 1972. Since registration, with minor exceptions, occurred when a man became 18, the sample may be regarded as consisting of 11 birth cohorts, with the year of birth ranging from 1944 to 1954.

Lifetime drug use is shown by year of birth in Table 2.2. In this table the data pertain to cigarettes rather than tobacco; there appears to be a lower prevalence of cigarette use in the younger cohorts. There is little variation in the column for alcohol, but for all other drugs there is a clear tendency for the percentages to be higher in the younger cohorts. Drug use has been much more widespread among the younger than the older men in the sample.

Race

In Table 2.3 the lifetime use of the drug classes is shown in terms of race. Only whites and blacks will be considered in more detailed analyses; the other groups are too small for analysis. Some of the differences between whites and blacks are small and could be due to sampling variation. Nevertheless, blacks exceed whites in the percentages for marihuana, heroin and cocaine to an extent that suggests a real difference.

The first two tables show relationships between lifetime use and race and between use and year of birth. These three variables are presented in Table 2.4, and there is a complex but clear interrelationship. In the table the data for whites and blacks are presented by year of birth; adjacent years are combined to reduce the 11 cohorts to four age groups. Blacks and whites are similar in terms of tobacco use. The same trend towards less use by younger men that was seen for cigarettes in Table 2.2 is apparent for blacks and whites. The minor variations for alcohol can be ignored as easily due to sampling variation.

However, a surprising pattern emerges for the other drugs. Among whites, the tendency for more use by younger men is even clearer than

Table 2.3. Lifetime Use of the Drug Classes by Race (Percentages)

Used	Total (2510)	White (2103)	Black (303)	Spanish (48)	Other (56)
Tobacco	88	88	87	83	88
Alcohol	97	97	94	94	98
Marihuana	55	54	65	54	48
Psychedelics	22	22	25	21	18
Stimulants	27	28	25	23	27
Sedatives	20	20	24	13	20
Heroin	6	5	14	6	5
Opiates	31	31	34	15	29
Cocaine	14	13	24	10	11

Table 2.4. Comparison of Whites and Blacks on Lifetime Drug Use by Year of Birth (Percentages)

Used:	WHITE					BLACK				
	Total (2103)	Before 1947 (467)	1947-49 (581)	1950-52 (603)	1953-54 (452)	Total (303)	Before 1947 (49)	1947-49 (86)	1950-52 (105)	1953-54 (63)
Tobacco	88	93	89	88	83	87	94	91	84	83
Alcohol	97	98	98	97	96	94	98	92	93	95
Marihuana	54	38	52	63	60	65	47	69	72	60
Psychedelics	22	9	16	29	33	25	12	34	27	19
Stimulants	28	18	27	35	31	25	10	33	29	21
Sedatives	20	13	17	23	27	24	14	29	26	21
Heroin	5	2	3	7	7	14	12	16	20	2
Opiates	31	25	27	35	38	34	16	42	33	37
Cocaine	13	5	9	18	19	24	16	30	28	17

Table 2.5. Lifetime Drug Use by Size of City of Residence to Age 18 (Percentages)

	Total (2510)	Out of U.S. or Unknown (61)	1,000,000- or more (187)	500,000- 999,999 (183)	100,000- 499,999 (427)	50,000- 99,999 (201)	25,000- 49,999 (265)	2,500- 24,999 (730)	Less Than 2,500 (456)
Tobacco	88	89	88	88	89	86	86	87	91
Alcohol	97	98	98	97	97	99	98	96	97
Marihuana	55	38	70	58	64	55	55	54	43
Psychedelics	22	13	32	25	26	22	25	21	13
Stimulants	27	15	37	31	29	26	29	29	20
Sedatives	20	10	34	27	25	18	22	18	12
Heroin	6	2	13	10	8	5	6	4	4
Opiates	31	15	36	37	37	28	33	31	24
Cocaine	14	5	27	17	18	12	16	13	6

in Table 2.2. But the tendency does not appear for blacks, where each row shows a U-shaped curve, and the youngest blacks report less lifetime use than the youngest whites for most drugs, and no more use for any drug. Explanations for this difference will be sought later, but meanwhile it should be kept in mind that the inverse relationship between age and drug use, for all drugs except alcohol and tobacco, holds only for whites. Indeed, except for blacks born before 1947, the pattern for most drugs is the reverse of the pattern for whites; there is less use in the younger groups.

Residence to Age 18

Respondents were asked to name the city where they had lived most of the time to age 18. This age was chosen because it was approximately a mid-point in the age range when most drug use might be expected to have started. The size of the city was coded, and lifetime use by size of city is shown in Table 2.5.

Tobacco and alcohol show negligible variation, but for all other drugs the pattern is identical. With a minor exception for opiates, the percentage is always highest for the largest cities, those with populations of a million or more. Without exception, the percentage is always lowest in places under 2,500 in size. Between the two extremes, the trend is generally downward from left to right, and is even more regular if the categories are reduced to five by combination of the cities from 100,000 to 999,999 and those from 25,000 to 99,999.

It is worth emphasizing that while size of the city of residence to age 18 is clearly associated with drug use, it is still true that even in the smallest places in the United States drug use was by no means absent. Among men from cities over 1,000,000 in size, 70 percent had used marihuana. The figure drops to around 60 percent in smaller cities, and finally to 43 percent in places under 2,500. Yet, 43 percent is still a sizable figure, even though it is substantially lower than those for larger places. The same point can be made for the other drugs.

The relationship between city size and drug use is not contingent on age and race, but these variables are related to each other, and it is difficult to estimate their relative effects on drug use. For example, blacks are more likely to be from large cities; 31 percent of the blacks, in comparison with 12 percent of the whites, were raised in cities over 500,000 in size. Only 33 percent of blacks, but 50 percent of whites, were raised in places with less than 25,000 in population. With regard to race and age, identical proportions of blacks and whites were interviewed in the 1947-49 and 1953-54 birth cohorts, but 22 percent of whites and only 16 percent of blacks were born in 1944-46, while 29 percent of the whites and 35 percent of the blacks were born in 1950-52.

The blacks, therefore, are over-represented in the largest cities and among the younger men, and both city size and age are factors associated with more drug use. One effect of this can be exemplified by the difference between whites (54 percent) and blacks (65 percent) in marihuana use. If the distributions by age and city size were the same for blacks as for whites, the overall percentage of marihuana use would be 60 percent among blacks. This would eliminate half of the difference between blacks and whites. Even this reduction is almost certainly an underestimate because the measure of city size is a crude one. More of the blacks presumably lived in poorer, more crowded neighborhoods than whites who lived in cities of the same size. If data were available to control such variables, nearly all of the difference between the races might be explained.

It might appear that the opposite argument could be made; perhaps city size and age seem more strongly related to drug use than they really are because of the distribution of blacks, who have high use rates, on these variables. This can be rejected because city size is strongly related to lifetime drug use with race controlled. The inverse relation between age and drug use is strong among whites for all drugs except alcohol and tobacco. Because whites constitute 84 percent of the sample, this relation also holds for the sample as a whole, despite the fact that it does not hold for blacks.

Educati

The data on lifetime use of drugs are presented in Table 2.6 by education; the last year of school completed serves as the measure of education. Because race has been shown to be associated with a number of variables, the data are presented separately for whites and blacks, and the 104 cases in other ethnic categories are ignored because the numbers become too small for cross-tabulations.

For both races there is a clear trend toward less use of tobacco with increasing education. There is no association between education and alcohol use. The only linear trend among the other drugs is for heroin; among whites

Table 2.6. Lifetime Use of Drugs by Education (Percentages)

		WHITE					BLACK				
	Total* (2510)	Total (2103)	Less than High School (263)	High School Graduate (785)	Some College (617)	College Graduate (438)	Total (303)	Less than High School (95)	High School Graduate (114)	Some College (72)	College Graduate (22)
Tobacco	88	88	94	92	85	83	87	88	89	86	77
Alcohol	97	97	96	98	97	98	94	93	96	97	77
Marihuana	55	54	51	52	60	51	65	61	64	75	50
Psychedelics	22	22	23	21	27	13	25	17	25	33	32
Stimulants	27	28	29	26	32	25	25	18	28	32	18
Sedatives	20	20	21	18	23	18	24	18	24	33	18
Heroin	6	5	9	6	5	1	14	17	12	15	5
Opiates	31	31	34	31	33	26	34	23	37	43	32
Cocaine	14	13	16	11	16	8	24	20	25	33	9

*This column includes the 104 men who classified themselves as Puerto Rican, Oriental, American Indian, or Other.

the percentage of heroin use drops regularly as education increases, and this is roughly true for blacks too.

Among whites the lowest percentage of use is found among college graduates for all drugs except alcohol. This holds for blacks for all drugs except psychedelics and opiates. In addition, those who attended college but did not graduate tend to show the highest percentage of use. This is true among whites for all drugs except tobacco, alcohol, heroin and opiates, and in the last case the percentage falls only one point short of being the highest. For blacks, the only exceptions are tobacco and heroin. This relationship holds for all except the 20 and 21 year old men.

For these young men "some college" has less meaning as a description of completed education, because many of them were still in college and will graduate. These relationships help to explain away some of the black-white differences in drug use; college graduates show less use, but only 7 percent of blacks, in contrast with 21 percent of whites, are college graduates.

The fact that the youngest groups do not fit the pattern of the other groups with respect to education, and the general impression that at least some forms of drug use have been especially common on college campuses, suggest an examination of those men who were still students at the time of the interview. To control age, only those born after 1950 were included in Table 2.7. Of 870 whites in that age group, 31 percent were still students, as were 19 percent of the blacks. There were a few still in high school and some in graduate school, but most were college students.

The reader's attention is called to the fact that the numbers of black students are small--11 and 13 in the two age groups. Despite this, the findings are striking. If one

Table 2.7. Drug Use by Race and Whether or Not Now in School, for Men Born After 1950 (Percentages)

	WHITE			BLACK		
	Total	1951-52	1953-54	Total	1951-52	1953-54
Number In School At Interview	(273)	(108)	(165)	(24)	(11)	(13)
Number Not In School At Interview	(597)	(310)	(287)	(104)	(54)	(50)
Tobacco In School	83	86	81	71	73	69
Not In School	87	89	85	83	80	86
Alcohol In School	96	97	96	92	91	92
Not In School	97	98	97	94	93	96
Marihuana In School	63	69	58	62	82	46
Not In School	60	59	62	67	70	64
Psychedelics In School	25	27	24	29	45	15
Not In School	34	31	38	18	17	20
Stimulants In School	30	38	25	17	36	0
Not In School	33	33	34	23	20	26
Sedatives In School	25	28	22	17	27	8
Not In School	26	23	30	24	24	24
Heroin In School	5	5	5	12	27	0
Not In School	8	8	8	9	17	2
Opiates In School	31	32	30	38	45	31
Not In School	38	33	43	36	33	38
Cocaine In School	16	17	15	25	36	15
Not In School	20	19	21	21	24	18

examines the total columns, the general pattern is that those who have left school are more likely to have used drugs than those still in school. Among whites the only exception is marihuana; among blacks the exceptions are psychedelics, heroin, opiates and cocaine. The surprising finding is that among the men born in 1953-54, the youngest men in the sample, there are no exceptions. In the 18 comparisons possible, all 18 show a higher percentage of use among those who have left school. The young men still on campus show less use than their off-campus peers.

To examine this further, the data for whites will be used because the numbers on which their percentages are based in Table 2.7 are sufficiently large to warrant some confidence in percentage differences. The fact that the youngest men still in school show less drug use than their off-campus peers does not seem to be due to any decrease in the use of drugs by students. Only for marihuana, stimulants and possibly sedatives do the 20-21 year old students show less use than the 22-23 year old students, and these could well be differences that will disappear as they become a little older. However, for non-students, the younger group shows more use of all drugs, except for heroin, than the older group. The data are consistent with the hypothesis that campus use was higher than among non-students of the same age until a few years ago, but that non-student use has increased to the point of equalling or slightly exceeding student use.

One other educational variable, college major, is related to drug use. Thirteen hundred (52 percent) of the sample did not attend college. Of the 1,210 who did, 344 indicated that their college major was Social Science, Fine Arts or Humanities. Except for tobacco and heroin, this group reported higher percentages of drug use than did those with other majors or those who did not attend college. The differences tend to be substantial; 69 percent used marihuana, as compared with 52 percent of those with other majors and 53 percent of the non-college group. For psychedelics the corresponding percentages are 35, 17 and 22; for stimulants 39, 25 and 26; for sedatives 32, 17 and 19; for opiates 36, 29 and 31; and for cocaine 22, 11 and 14. The pattern differs only for heroin; 5, 3 and 8.

Current Family Status

The variables discussed thus far might, after further analysis, be seen as causes or determinants of drug use. This is not the case, or at least is less clearly so, for the variables remaining to be discussed in this section. An obvious hypothesis is that the more conventional men are, or the more committed they are to others and to the system within which they live, the less likely they are to use drugs. Additional measures of conventionality will be developed later, but the available data on current family status and part of the data on employment are relevant.

Both marriage and employment are likely to occur years after drug use usually begins,

Table 2.8. Lifetime Use of Drugs by Current Family Status (Percentages)

			Parental Home		
	(2510)	Married (1309)	(285)	Independent (796)	Coupled (120)
Tobacco	88	90	78	87	91
Alcohol	97	97	94	97	100
Marihuana	55	46	51	68	82
Psychedelics	22	13	20	34	52
Stimulants	27	21	16	38	53
Sedatives	20	13	14	31	46
Heroin	6	3	6	9	18
Opiates	31	26	26	37	52
Cocaine	14	7	12	23	41

so in the literal sense they could not be seen as causes of drug use. If they are tentatively accepted as indicators of conventionality, and the further assumption is made that this conventionality has been present many years, their relation to drug use may be examined.

In Table 2.8 lifetime use of drugs is shown for four groups: married and living with one's wife; living with a woman to whom the man is not married, or "coupled"; living in the parental home; and living independently. The findings are striking. With the exception of tobacco and alcohol, each drug shows the same pattern. The percentage is lowest for the married, next lowest for men living with their parents, higher for those living independently and highest for those living with women to whom they were not married. A minor reversal occurs for the stimulants, as those still in parental homes show a lower percentage than the married.

The pattern holds perfectly for whites for all drugs except tobacco and alcohol, and the relationship is strong for all drugs; the percentage difference in use between the married and coupled averages 35, except for heroin; 2 percent of the married and 16 percent of the coupled men had used heroin. The pattern generally holds for blacks; the exceptions are psychedelics and stimulants, where the coupled show lower percentages of use than the men living independently. The relationship is, however, weaker among blacks; the average percentage difference between the married and coupled men is 16, and the corresponding difference among whites is 35. Among blacks, 11 percent of the married men and 21 percent of the coupled had used heroin.

The pattern also holds for the 104 men in other ethnic categories, except for minor reversals on marihuana and psychedelics. The relationship between family status and drug use is even more marked for these men. The difference in drug use between the married and coupled averages 67 percent; for heroin the figures are 2 and 33. There were only 6 men who were coupled, so the percentages may be unstable. The most conservative interpretation is that the relation between drug use and family status holds for all men, with minor ethnic differences that may be due to small bases for percentages.

The respondents were also classified on the basis of whether or not they had ever been married. With the exception of tobacco and alcohol, higher percentages of those never married reported use of all drugs, and usually the differences are sizable. This is not due to age, because the differences hold within four age groups for whites and for blacks, except those born in 1950-52.

Current Employment Status

For employment, the data available permitted division of the sample into four groups:

Table 2.9. Lifetime Use of Drugs by Current Employment Status (Percentages)

	Total (2510)	Working 30 or more hours per week (1980)	Students, except for those working 30 hrs. or more (282)	Working less than 30 hrs. (35)	Unemployed (213)
Tobacco	88	88	84	77	92
Alcohol	97	97	96	97	96
Marihuana	55	52	62	74	72
Psychedelics	22	19	27	40	41
Stimulants	27	25	30	37	41
Sedatives	20	18	22	23	35
Heroin	6	5	6	6	18
Opiates	31	30	31	31	44
Cocaine	14	12	17	29	31

those who were working 30 hours per week or more; students except for those in the first group; those working less than 30 hours; and the unemployed. These groups are defined as of the date of the interview. The relationship between employment and drug use may be seen in Table 2.9.

If one again ignores tobacco and alcohol, the pattern is identical for the other seven drugs. Those who were working 30 hours or more show the lowest percentage, and the percentages increase from left to right, with the partially employed and unemployed showing the highest percentages. The older men, who report lower percentages of drug use, would be expected to be among the full-time employed. On the other hand, blacks are far more likely to be unemployed than whites, though what effect this would be expected to have is unclear because of the complex relationships among ethnicity, age and use. The statistical facts are as expected. Among whites, 5 percent of the 28-30 year olds were unemployed, 9 percent of the men 25-27, 10 percent of the 22-24 year olds, and 10 percent of the men who were 20 or 21. Among blacks, the corresponding percentages are 12, 28, 17 and 24.

Therefore, the relationship between lifetime use of drugs and current employment status was examined with simultaneous controls on ethnic group and year of birth, for all drugs except tobacco and alcohol. Among blacks, only 15 were classified as students and 12 as employed less than 30 hours per week; consequently, the only comparison possible is between the 213 employed full-time and the 63 unemployed. The differences between these groups hold for blacks, but are considerably smaller; it is only for cocaine and heroin, where the differences are 9 and 10 points, respectively, that the differences approach those in Table 2.9. In short, the relationship between employment status and drug use exists for blacks, but is weak, while it is strong among whites.

In general, the oldest group of whites (those born in 1944-46) contribute little to the difference in drug use between the men employed full-time and the unemployed. Only for marihuana and opiates does the difference exceed a few percentage points. The other three age groups contribute more; the two youngest groups contribute the most and approximately equally. No such regular pattern is seen across the age groups among the blacks.

The respondents were asked, "How much money do you make now before taxes?" Answers were recorded for whatever units of time the men chose to use and the unit chosen may be taken as an indicator of subjective social class identification. Those who reported income by the hour, day or week may be roughly equivalent to blue-collar workers, and those who reported by month or year to white-collar workers.

Whether or not this interpretation is correct, the findings are clear. For whites, those who used hour, day or week as the unit for reporting income show consistently higher percentages of drug use than the men who used month or year as the unit, and the relationship is maintained with year of birth controlled. Both groups are consistently below the percentages for the unemployed. This pattern does not hold at all for blacks.

There is, then, evidence that indicators of conventionality or of having a stake in the system are associated with lower rates of drug use. The point should again be made that even among the conventional men drug use is not absent. Among those who used month or year as the unit, for example, 50 percent had used marihuana, 3 percent heroin and 10 percent cocaine.

MEASURES OF THE EXTENT OF USE

Data on the number or percentage of men who have ever used a drug, while useful, conceal extensive variations in the amounts and patterns of use. More refined analysis will be possible if the users can be separated into several categories, ordered on amounts and patterns, though the number of categories which it is practical to define will vary with the number of users.

Two sets of questions from the interview schedule were used to develop the indexes of extent of use for all of the drug classes.

1) Table 2.1 showed the data obtained from a question posed for each drug class: "About how many times in your life have you used these drugs on your own?" The pre-coded answers were "less than 10 times," "less than 100 times," "less than 1,000 times," "1,000 times or more." A fifth category was "never used."

2) Those who reported having used a drug 10 or more times were asked a series of questions about use of the drug in each year from 1957 to 1974. For each year in which use was reported, the respondents were asked to indicate the extent of use in that year. The categories were:

   (a) almost every day, usually in

Table 2.10. Lifetime Highest Frequency and Quantity of Use for the Total Sample and for Users Only (Percentages)

	HIGHEST FREQUENCY OF USE					HIGHEST QUANTITY OF USE	
	Almost Every Day	1 - 2 Times a Week	1 - 2 Times Month	Other Use In Lifetime	Never Used	At Least Monthly, Sometimes In Large Amounts	Other Use In Lifetime
A. As percent of total sample (n=2510)							
Alcohol	31	42	16	9	3	67	30
Marihuana	15	12	8	21	45	24	31
Psychedelics	1	3	4	15	78	4	18
Stimulants	3	4	5	15	73	7	21
Sedatives	1	3	3	13	80	4	16
Heroin	2	*	*	3	94	2	4
Opiates	1	2	3	25	69	3	28
Cocaine	1	1	2	10	86	2	12
B. As percent of lifetime users							
Alcohol	32	43	16	9		69	31
Marihuana	27	22	14	38		43	57
Psychedelics	4	13	17	66		17	83
Stimulants	11	16	18	55		25	75
Sedatives	7	13	15	65		19	81
Heroin	32	8	6	54		33	67
Opiates	3	6	10	81		9	91
Cocaine	5	7	13	74		17	83

*Less than half of one percent.

large amounts
(b) almost every day, sometimes in large amounts
(c) almost every day, never in large amounts
(d) about once or twice a week, sometimes in large amounts
(e) about once or twice a week, never in large amounts
(f) about once or twice a month, sometimes in large amounts
(g) about once or twice a month, never in large amounts
(h) less than once a month.

One measure of extent of use can be based on the answers to these frequency-amount questions. In Table 2.10 the data are presented separately for frequency and amount for the year in which each was highest.

Extent of Use Indexes: Alcohol and Marihuana

For alcohol, the first category consists of those who never used alcohol, and the second those who had used it less than ten times. Four other categories were defined from a cross tabulation of the questions on lifetime frequency and amount of use. The categories were defined as follows:

Total Amount of Use (Lifetime)	Never Used Large Amounts	Sometimes Used Large Amounts
Under 100	Group 3	Group 4
Under 1000	Group 3	Group 5
1000 or More	Group 4	Group 6

To describe the groups in words and to give them names for use in later discussion, the men were described with respect to alcohol use as follows:

1.	Nonusers	No use of alcohol at any time	(76)	3%
2.	Experimental users	Used on less than 10 occasions	(93)	4%
3.	Light users	Used more than 9 but less than 1000 times, and never in large quantities	(491)	20%
4.	Moderate users	Used 1000 times or more, but never in large quantities, or used less than 100 times, sometimes in large quantities	(318)	13%
5.	Heavy users	Used more than 99 but less than 1000 times, sometimes in large quantities	(599)	24%
6.	Heaviest users	Used 1000 times or more, sometimes in large quantities	(933)	37%

It should be emphasized that the names attached to the six groups are not intended to express a judgment that the alcohol use was negligible or excessive, but simply to label relative amounts of use within this sample. That this purpose is served should be evident in Table 2.11, in which the six groups are compared on eight criterion variables. It was their similarity on these variables that justified combining the two cells labeled Group 3 above into "light users" and the two labeled Group 4 into "moderate users," and keeping the other cells as separate groups.

The alcohol measure quite clearly distinguishes the six groups on variables that have traditionally been regarded as important indicators of drinking behavior. The labels heavy and heaviest use are justified in more than a relative sense. For example, of those so labeled 45 and 55 percent, respectively, have used alcohol to the extent of being unable to remember what had happened to them, and 71 and 84 percent have driven a car while drunk. Moderate and light may be misnomers, since the percentages on these variables, while lower than for heavy users,

Table 2.11. Distribution of Criterion Variables by Extent of Use of Alcohol (Percentages)

	Total (2510)	No Use* (76)	Experimental Use (93)	Light Use (491)	Moderate Use (318)	Heavy Use (599)	Heaviest Use (933)
Have stayed high more than a day at a time	8	-	2	1	4	6	16
Couldn't remember what happened as result of alcohol use	38	-	6	14	28	45	55
Physically or psychologically dependent on, or addicted to, alcohol	5	-	0	0	1	4	10
Arrested for drunken driving	8	0	0	3	7	8	20
Been drunk in a public place	70	0	16	39	67	82	90
Driven a car while drunk	60	0	12	25	53	71	84
Been treated for alcohol use	1	0	0	0	1	1	2
Never been drunk	14	97**	62	32	9	4	2

*A dash indicates that the question was not asked of non-users.

**Logically this figure should be 100 percent, but two men, in completing a self-administered questionnaire, indicated an age at which they first got drunk on alcohol. This is an instructive example of the errors encountered in any research of this kind. It has not yet been possible to examine the interview schedules to see how the error occurred. It may be a coding or punching error, or the man may have placed his answer to an adjacent question on the wrong line--or it could be that these men had actually used alcohol but denied use, for any of a variety of reasons, when the questions about use were asked.

are by no means negligible. Even among the light users 14 percent have had the experience of not being able to remember, and 25 percent admit to driving while drunk.

The findings in Table 2.11 suggest that it may be possible to build a better measure, but that this one will serve for the initial analysis as an improvement over a simple dichotomy of use and no use. It also establishes that for a clear majority of the sample alcohol was used to the extent that it could have caused problems for the user and others.

Marihuana groups were constructed by the same method. In addition to those who never used, and those who used less than 10 times, the classification in terms of frequency and amount was as follows:

Total Amount of Use (Lifetime)	Never Used Large Amounts	Sometimes Used Large Amounts
Under 100	Group 3	Group 4
Under 1000	Group 4	Group 5
1000 or More	Group 5	Group 5

Thus, with respect to marihuana use the men were described as follows:

1.	Nonusers	No use of marihuana at any time	(1128)	45%
2.	Experimental users	Used on less than 10 occasions	(423)	17%
3.	Light users	Used less than 100 times, and never in large quantities	(231)	9%
4.	Moderate users	Used more than 99 times but less than 1000 times, never in large quantities, or used less than 100 times, but sometimes in large quantities	(227)	9%
5.	Heavy users	Used 100 times or more, sometimes in large quantities, or used over 1000 times, never in large quantities	(501)	20%

These groups are compared on seven variables in Table 2.12; again, the groups produce the expected regular increases in percentages from experimental to heavy use.

Extent of Use Indexes: Psychedelics, Heroin, Cocaine, Tobacco

The number of respondents who had ever used psychedelics, heroin and cocaine was relatively small, especially those who had used these drugs 100 times or more. Thus, it was decided that the most appropriate way to classify these respondents was simply in terms of the number of times the drug had ever been used.

The situation for tobacco is similar, but for different reasons. In the first place, less detailed information was obtained, and this was primarily concerned with use of cigarettes. Second, most (59 percent) of the users fell into the category of 1,000 times or more.

For these four drugs, therefore, the following categories will be used to measure the extent of lifetime use: no use, under 10, 10-99, 100-999 and 1,000 or more times (Table 2.1).

Extent of Use Indexes: Stimulants, Sedatives, Opiates

A different kind of problem arises in constructing indexes of the extent of use for the stimulants, sedatives and the opiates. Drugs in these classes are sometimes prescribed by physicians for medicinal purposes. Thus, it was necessary to utilize questions that would differentiate between medical and nonmedical use of these drugs.

Stimulants were the first of these classes mentioned, and the respondents were told:

Table 2.12. Variations in Use, by Extent of Use of Marihuana (Percentages)

	Total (2510)	No Use (1128)	Experimental Use (423)	Light Use (231)	Medium Use (227)	Heavy Use (501)
Have used marihuana (1372)	55	0	98	100	100	100
Have used hashish (719)	29	0	14	38	57	88
Have used hashish oil (301)	12	0	1	4	14	51
Have used on daily basis (369)	15	-	#	2	23	62
Have used once or twice a week (673)	27	-	#	22	60	93
Used to get high or stoned (1121)	45	-	53	84	93	98
Grew or made own supply (265)	11	-	2	8	15	41

#The questions on frequency were not asked of those who had used less than 10 times.

Some drugs are used medically and also are used by people on their own. By medical use, we mean according to a doctor's direction--pretty much in the amounts and at the time he directs. Anything else we define as use on your own.

Here is a list of drugs called stimulants. Please tell me which of the drugs on Card 3 you have ever used on your own, even once. Do not include any stimulants you only used medically.

For sedatives and opiates, a respondent was handed separate cards and asked to indicate which of the drugs on the list you have "ever used on your own, even once." The respondent was again reminded to exclude any sedatives or opiates he had only used medically.

Respondents seemed to have little difficulty with the distinction between "use on your own" and "medical use." There is no reason to believe that medical use was included in the responses given, except for a handful of cases in which the age at first use is so low as to make it difficult to believe that the use could have been on the respondents' initiative.

But the definition of medical usage was fairly narrow, and it is known that people commonly use medications in ways which would be non-medical according to the definition employed in this study, but yet in a manner more closely resembling medical use than what many would describe as "drug abuse." For example, a man may have had an opiate such as Darvon or Demerol prescribed for some medical condition and used only part of the prescription. Later, when the same or similar symptoms appeared, he used the remainder of the prescription. According to the definition utilized in this study, such use would correctly be classified as use "on your own." Similarly, a man could have used an opiate obtained by his wife by means of a prescription if he decided that he had a pain which called for an opiate. This too would be correctly classified as use "on your own."

Most physicians would probably frown on such self-diagnosis and self-medication, and some of it may be technically illegal, but it appears to be a common practice. Certainly such quasi-medical use should not be confused with the use of opiates for other purposes. The fact that almost one-third of the sample reported using opiates on their own suggests that quasi-medical use was an appreciable part of the use reported in this study.

This necessitated the development of criteria to separate quasi-medical from other use of the opiates. Eleven variables were judged to be useful criteria, and the users of opiates who met all eleven are classified as quasi-medical users of opiates. (The criteria, and the reasons for not accepting those who met 10 of the 11 as quasi-medical users, are described in Appendix I.)

The classification of opiate users thus becomes:

1. No use	(1731)	69%
2. Quasi-medical use	(286)	11%
3. Experimental use (less than 10 times and failed one or more criteria)	(300)	12%
4. Light use (10-99 times and failed one or more criteria)	(145)	6%
5. Heavy use (100 or more times and failed one or more criteria)	(48)	2%

The heavy users could be subdivided further by extent of use, but the numbers would be too small for analysis. Indeed, in the analysis of the data, it was sometimes necessary to combine the light and heavy users.

According to this classification, the fact that 31 percent of the men in the sample have

used opiates takes on a different meaning. Eleven percent of the sample, or more than one-third of the men who reported opiate use were using them in a manner not far removed from legitimate medical usage. Thus, only 20 percent of the sample can be said to have used opiates in a way that could reasonably be seen as abuse of opiates, and in only 8 percent of the sample was this use more than experimental.

Eleven similar criteria (Appendix I) were used to identify quasi-medical use of stimulants. The classification of users of stimulants then becomes:

1.	No use	(1821)	73%
2.	Quasi-medical use	(108)	4%
3.	Experimental use (less than 10 times and failed one or more criteria)	(207)	8%
4.	Light use (10-99 times and failed one or more criteria)	(242)	10%
5.	Heavy use (100 or more times and failed one or more criteria)	(132)	5%

This classification does not change the general picture of use as much as was noted for opiates. Twenty-seven percent of the sample used stimulants; removal of the 108 cases of quasi-medical use reduced to 23 percent the proportion whose use might be labeled "abuse," and in only 15 percent of the sample did this exceed experimental use.

For sedatives, ten criteria (Appendix I) were used to identify quasi-medical use; this produces the classification:

1.	No use	(2002)	80%
2.	Quasi-medical use	(99)	4%
3.	Experimental use (less than 10 times and failed one or more criteria)	(177)	7%
4.	Light use (10-99 times and failed one or more criteria)	(158)	6%
5.	Heavy use (100 or more times and failed one or more criteria)	(74)	3%

The change in the general picture resembles that for stimulants more than the change noted for opiates. Twenty percent of the sample used sedatives; removal of the 99 quasi-medical users reduced this to 16 percent, and in 9 percent of the sample, use was more than experimental.

A general point should be made about these classifications of quasi-medical use for three classes of drugs. The definition of quasi-medical use is a rigorous and

conservative one. This is only in part because of the requirement that all criteria be met; it is clear in Appendix I that relaxation of the requirement would shift only a few men from the experimental to the quasi-medical category. The definition is rigorous because the criteria are applied to the entire history of drug use. For example, if a man ever used one of these drugs to get high he was not classified as a quasi-medical user, even though most of his use might, if more detailed data were available, be categorized as quasi-medical. The classifications used here require that all of a man's use of opiates, stimulants or sedatives was quasi-medical.

VARIATIONS IN THE EXTENT OF USE

The measures of extent of use of each drug have been developed primarily for use in later chapters, but it is worth determining whether they change any of the findings reported in the first section of this chapter. In the following analysis, experimental and quasi-medical use will be ignored, but the cutting point used will vary from drug to drug to provide an adequate number of cases for analysis.

In Table 2.2, there was almost no variation by birth cohorts in the percentage that had used alcohol. Although not shown in tabular form, among the heaviest alcohol users there is a clear trend for the younger cohorts to show lower percentages; this may mean only that it takes a number of years to have used the drug a thousand times. In the six oldest cohorts, the percentages of heaviest alcohol use are over 40; in the next three they average 35, and in the two youngest 28.

The older cohorts reported lower rates of marihuana use, but the lowest rate was at least half as high as the rates observed in the younger cohorts. These differences are accentuated when extent of use is considered. For moderate and heavy marihuana users, the percentages increase steadily from 12 percent for the two oldest cohorts to 37 percent or more in the five youngest cohorts. No only did fewer men in the older cohorts use marihuana, but those who did used it less. The data examined thus far are consistent with the possibility that, after marihuana use became popular among youth, some older men tried it a few times to see what it was like, but did not use it extensively.

For psychedelics, heroin and cocaine all use other than experimental was included; for these drugs the patterns do not appear to differ appreciably from the patterns in Table 2.2.

Differences might be expected when both experimental and quasi-medical use are excluded for stimulants, sedatives and especially opiates, because there are many quasi-medical users. For stimulants and sedatives the changed basis for comparison accentuates the patterns observed in Table 2.2; the younger cohorts exceed the older ones more markedly. For opiates only a moderately higher percentage was observed for younger cohorts in Table 2.2, and this difference is somewhat greater when the cohorts are compared on light or heavy opiate use.

Alcohol use was reported by 97 percent of the whites and 94 percent of the blacks (Table 2.3). When the comparison is restricted to heavy and heaviest alcohol use, the comparable figures are 64 and 44. For moderate and heavy marihuana use, instead of any marihuana use, blacks still exceed whites by 39 to 27 percent. The percentage of heroin use was 5 for whites and 14 for blacks. With experimental use excluded, the figures are 2 and 8. For cocaine, the percentages were 13 for whites and 24 for blacks; with experimental use excluded, they are 5 and 13. In short, racial differences in drug use remain or are accentuated when extent of use is taken into account.

DISCUSSION

In this chapter data have been presented on the relations between a number of variables and use of the nine drug classes. There is a danger of becoming lost in details, especially since these variables interact with each other. The major source of confusion is race, because some variables operate differently for whites and blacks. A summary of the major findings may therefore be useful.

The statistical relations are clear for whites, who constitute 84 percent of the sample. There are 303 black respondents. This is a sufficiently large number to permit classification on one variable and usually on two variables, but cell sizes then tend to become so small that comparisons must be made with caution. There are also 104 subjects who fall in several other groups; each group is too small, and even the combination of them provides too few cases for analysis; in addition, there is little justification on any grounds for combination of these diverse groups. Therefore, they have usually been excluded from the analysis.

There are marked differences in drug use by birth cohorts. For whites the pattern is clear. There is no variation for alcohol, but for tobacco the younger cohorts show less use, and for all other drugs more use. The patterns for blacks resemble those of whites for tobacco and alcohol but differ for all other drugs. The general pattern for blacks is a U-shaped curve, with the three oldest and two youngest cohorts showing less use than the middle six cohorts. There seems to be a strong possibility that the two races have been converging with respect to drug use, with whites showing increases and blacks decreases to approximately equal levels, but this cannot be asserted with confidence because the oldest and youngest groups of blacks are the smallest.

Respondents were asked where they had lived most of the time to the age of 18, and the size of the city they named was coded. For all drugs except tobacco and alcohol, city size is directly related to drug use. This is true for whites and blacks separately as well as for the sample as a whole, but blacks are more likely to come from large cities.

The relation between education and drug use is not strong, but there was somewhat less use among those who have graduated from college, and somewhat more among those who attended college and did not graduate. This holds for both whites and blacks, but blacks are less likely than whites to have entered or graduated from college.

Of those who ever attended college, rates of drug use are clearly higher for those who gave the Social Sciences, Fine Arts or Humanities as their majors. Blacks, of course, are less likely to attend college and to report these majors. One negative finding is that the men who were still students when interviewed reported no more drug use than their non-student peers; in the two youngest cohorts, those born in 1953-54, lifetime prevalence of drug use was lower among the students than among non-students. This seems to be as true for blacks as for whites, though the numbers of students among the blacks are so small that the estimates may be unreliable.

Current family status and whether or not the men were ever married were strongly related to drug use. Those married and living with their wives had the lowest percentages, while those living with women to whom they were not married had the highest percentages of drug use. Those ever married showed less use than those never married. These relationships were weaker for blacks than for whites.

Current employment status is also related to drug use; the lowest rates are observed among the full-time employed, and progressively higher rates are found among students, the part-time employed, and the unemployed. The relation remains with a control on age. It is strong for whites, and weak for blacks; in other words, the fact that blacks are more likely to be unemployed does not account for their higher rates of drug use. The period for which income was reported, a possible indicator of subjective social class, was strongly related to drug use for whites, but not for blacks.

The racial differences are, in short, complex. Some variables are related to drug use in the same way for whites and blacks, but others are strong for whites and weak or non-existent for blacks; further, one variable, year of birth, is related to drug use in almost opposite directions for whites and blacks.

Blacks show higher percentages of use of marihuana, heroin and cocaine than the sample as a whole, but controls on age and city size alone are sufficient to explain one-third to one-half of the difference. It seems plausible to assume that simultaneous controls on all of the variables would explain all of the difference, but there are not enough cases to control all variables in a tabular analysis. For this reason, two kinds of analysis will be used in later parts of this report.

At times there will be multivariate analysis of the entire sample, without reference to race or ethnic groups. In effect, such analyses will be based on the assumption that differences by ethnic groups are artifacts, due to their relationships with other variables, so that ethnicity can be ignored when the other variables are controlled. For the entire sample, it will be possible to control for at least three or four variables if the number of categories in each is small. Yet, the requisite assumption will never be fully justified, because controls on three or four variables will rarely, if ever, remove all differences between ethnic groups. At other times, the ethnicity variable or the black-white part of it will be used in the analysis.

3 Current Prevalence

This chapter deals with the question of current use, defined in a variety of ways. While it is important to know something of the extent to which a drug has ever been used by a population, an equally important consideration is the proportion who continue to use the drug.

As discussed in earlier chapters, the amount of information collected about a man's drug history, including his current use, was dependent on the total use of each drug reported by the respondent. Only men who reported using a drug ten times or more were asked specific questions about current use of that drug; specifically, these men were asked if their last use had been within 24 hours, 30 days, or if longer, the month and year of most recent use. It is thus possible to define current prevalence or "current users" among this group in terms of various time periods--anywhere from use within the last day to use within the last year or more.

Respondents who had used a drug less than 10 times were asked only the year of most recent use. It is problematic in the case of the men who reported use in 1974-75, the year prior to their being interviewed, whether they should be counted as current users; perhaps they were still in the experimental stage with the possibility that some will become regular users, while others may have stopped using and will never use again. A partial solution to this problem is provided by information concerning the respondent's perception of the chances that he will be using each class of drugs three years after the interview. When those who have used a drug less than 10 times were categorized into two periods of most recent use, pre-1974 and 1974-75, and their responses to the question about chances of future use into no chance and some chance, it was found that the degree of association between these two variables, as measured by Gamma, ranged from a low of .57 for opiates to a high of .97 for alcohol; the Gammas for marihuana and cocaine showed strong associations of .92 and .70, respectively. Clearly, these results suggest the inclusion of the experimenters whose most recent use was in the year prior to the interview in the category of current users.

The basic findings on current use within time periods ranging from 24 hours to 12 months are presented in Table 3.1. The percentages are based both on the number of those who ever used each drug and on the total sample. The distributions in the first six rows of the table apply only to those men who used a drug at least ten times. The last row applies to all users. Use in 1974-75 is generally employed as the definition of current use in this report because it is then possible to classify those who used a drug less than 10 times as well as those for whom more specific data were obtained.

Most of the interviews were conducted from November, 1974, to March, 1975; a few were done in October, 1974, and April and May, 1975. The mean time period covered by "use in 1974-75" is about a year; for individual respondents it ranges between 10 and 17 months.

The most conservative definition of current prevalence is use of a drug within the last 24 hours. It will be noted that among those who have ever used drugs, prevalence is highest for the socially acceptable drugs, cigarettes and alcohol, with 72 and 48 percent, respectively, reporting use. Marihuana ranks third; approximately one-fifth of those who have ever used it indicated use within 24 hours. The popularity of these three drugs is also evident in the percentages

Table 3.1. Cumulative Percent Reporting Current Use Within Selected Time Periods[a]

(Percentages)	CIGARETTES[b] Users	CIGARETTES[b] Total	ALCOHOL Users	ALCOHOL Total	MARIHUANA Users	MARIHUANA Total	PSYCHEDELICS Users	PSYCHEDELICS Total	STIMULANTS Users	STIMULANTS Total	SEDATIVES Users	SEDATIVES Total	HEROIN Users	HEROIN Total	OPIATES Users	OPIATES Total	COCAINE Users	COCAINE Total
n	1744	2510	2434	2510	1382	2510	550	2510	689	2510	508	2510	148	2510	779	2510	352	2510
Most recent use within																		
24 hrs.	72	50	48	46	19	11	1	0	3	1	2	0	1	0	1	0	1	0
30 days	80	55	88	85	46	26	8	2	19	5	15	3	10	1	8	2	12	2
2 mos.	82	56	90	87	50	27	12	3	21	6	17	4	11	1	10	3	16	2
4 mos.	83	57	91	88	54	29	15	4	25	7	21	5	15	1	13	4	18	2
6 mos.	84	58	92	89	56	30	17	5	28	8	25	6	20	1	15	5	22	2
12 mos.	86	59	93	90	59	32	23	6	32	9	30	7	28	1	20	7	27	3
Any use in 1974-75 (including experimenters whose most recent use was 1974-75)	86	60	95	92	69	38	34	7	43	12	44	9	31	2	33	10	51	7

[a] Information on most recent use within the time periods shown in the first six rows of this table was obtained only for men who used a drug more than 10 times.

[b] No information on most recent use of cigarettes for those who used less than 10 times.

Table 3.2. Current Use by Year of Birth (Percentages)

Drug	Total	YEAR OF BIRTH										
		1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954
n	2510	174	171	196	254	223	215	234	245	261	247	290
Cigarettes	60	63	56	61	63	54	63	68	59	61	52	56
Alcohol	92	90	92	90	92	91	91	94	91	91	94	91
Marihuana	38	26	19	26	28	36	37	45	44	49	48	49
Psychedelics	7	1	2	5	4	5	4	9	8	11	11	14
Stimulants	12	4	6	8	7	11	7	18	15	17	17	14
Sedatives	9	3	7	4	7	8	6	9	11	12	14	12
Heroin	2	0	0	1	1	1	1	2	3	3	4	2
Opiates	10	9	8	6	9	8	4	12	13	13	17	11
Cocaine	7	2	1	6	4	5	3	9	10	9	14	10

of the total sample who report use within the same time period; these range from 50 percent for cigarettes to 11 percent for marihuana. These figures contrast sharply with the very low or zero percentages who report use within 24 hours of drugs such as the psychedelics and stimulants.

A broader definition of current use includes use within the last 30 days. This results in alcohol replacing cigarettes as the drug of highest prevalence--more than 80 percent of the users and of the total sample have used alcohol within this time period. Of those who used marihuana, almost half reported that they had used it within the last month; with the total sample as the base, the proportion is slightly more than one-fourth.

With current prevalence defined in terms of use within a month, stimulants and sedatives show sizable increases in prevalence among users in comparison with a definition based on a 24 hour period, although they still rank below tobacco, alcohol and marihuana. Some of this increase is due to fairly infrequent quasi-medical use. On the basis of the screening procedure discussed in Chapter 2, the percentages of quasi-medical users among current users of stimulants and sedatives are 24 and 37, respectively.

Two interesting patterns of change are noted when the definition of current use is broadened to include use within the past twelve months. On the one hand, cigarettes and alcohol show relatively small increases; this is consistent with the fact that these drugs are commonly used on a daily, weekly or at most monthly basis. On the other hand, the percentages for current users of the other drugs show marked increases when the time period is increased to a year. In the case of the stimulants, sedatives, and opiates, which increase to 32, 30 and 20 percent, respectively, some of the increase is due to infrequent quasi-medical use of these drugs; one-fourth to one-third of the current users of these drugs are quasi-medical users.

The last row in Table 3.1 is of special interest because the difference between it and the row above indicates the extent of current experimental use of all but one (tobacco) of the nine classes of drugs examined in this study. With the addition of experimental users whose most recent use was in 1974-75, it will be seen that the increase in percentages of current users ranges from a low of 2 percentage points for alcohol to a high of 24 percentage points for cocaine. Except for heroin, which increases 3 percentage points (from 28 to 31 percent) there is an average increase of about 14 percentage points for the other drugs. Cocaine appears once again as a drug of recent popularity; 51 percent of those who ever used cocaine are current users, but almost one-half of the current users had used it less than 10 times.

VARIATIONS IN CURRENT USE BY SELECTED CHARACTERISTICS

While the drug by drug differences in current use are of interest, variations by such characteristics as year of birth, race and education are more relevant to an understanding of drug use. The broad definition of current use, any use in 1974-75, including experimental use within this period, is utilized to present the data by selected characteristics in Tables 3.2 through 3.7.

Year of Birth

The most salient feature involving year of birth is the marked tendency for more men in the younger cohorts to be using drugs currently (Table 3.2). While no clear tendency exists for cigarettes and alcohol, there is a definite trend in the case of marihuana; 49 percent of the youngest men (20 years old) in the sample are current users in comparison with 26 percent of the oldest cohort (30 years old). Although less pronounced, the same general pattern is evident for all the other drugs.

That the younger men are more likely to be current users is not surprising in view of the generally higher incidence of drug use among the younger men and the fact that they have started using more recently than the older men. It may be that use begins to decline after a number of years of use, but the analysis of cessation of use is incomplete, and it is too early to make such an assertion.

Race

Data on current use for whites and blacks are presented in Table 3.3. Blacks exceed whites in current use of marihuana, heroin, opiates and cocaine, but show a lower percentage of alcohol use.

Since racial differences in lifetime use of drugs were related to age, age was controlled in the examination of current use and race (Table not shown). The same trend toward convergence of whites and blacks that was noted for lifetime use was observed for current use. Specifically, for those drugs (marihuana, heroin, opiates and cocaine) for which blacks exceed whites in current use, the racial differences are greatest

Table 3.3. Current Use by Race (Percentages)

Drug	Total[1]	RACE White	Black
n	2510	2103	303
Cigarettes	60	59	66
Alcohol	92	92	85
Marihuana	38	37	48
Psychedelics	7	8	7
Stimulants	12	12	11
Sedatives	9	9	8
Heroin	2	1	4
Opiates	10	10	13
Cocaine	7	7	10

[1]Included here are 104 who classified themselves as other than white or black.

Table 3.4. Current Use by Education (Percentages)

Drug	Total	EDUCATION Less Than High School	High School Graduate	Some College	College Graduate
n	2510	394	933	713	470
Cigarettes	60	81	65	54	38
Alcohol	92	87	93	93	91
Marihuana	38	39	35	44	34
Psychedelics	7	7	7	10	5
Stimulants	12	11	13	14	8
Sedatives	9	10	9	9	8
Heroin	2	5	2	1	*
Opiates	10	10	11	10	9
Cocaine	7	7	6	10	4

*Less than half of one percent.

among the older men. For example, whereas 21 percent of whites born in 1946 or earlier were currently using marihuana, the percentage for blacks in this age group was 39--a difference of 18 percentage points. However, among the youngest men in the sample, those born in 1953 or 1954, the percentage of current users for whites was 49 in comparison with 51 for blacks, a difference of only 2 percentage points. Conversely, where whites exceed blacks in current use, the differences are greatest among the younger men. For example, among the youngest men 10 percent more of the whites than of the blacks were current users of sedatives; the comparable difference was 1 percent among the oldest men.

Education

In Table 3.4 the data on current use are presented for four levels of completed education. It will be noted that cigarette use declines considerably as education level increases; the percentage of current users among college graduates is about half that of men with less than a high school education. Current use of alcohol shows little variation by educational level, although the percentage is slightly lower among high school dropouts. Current use of marihuana evidences a complex relationship with educational level. Current use is greatest (44 percent) among those with some college education; the next highest figure (39 percent) is found among those with less than a high school education. College graduates are essentially identical to high school graduates in extent of current use of this drug. Weak negative relationships also exist for psychedelics, stimulants, sedatives, heroin, opiates, and cocaine; however, here again those men who attended college but did not graduate tend to deviate from the overall downward trend.

The possibility that age was responsible for these patterns of current use in relation to education was controlled by grouping the sample into four age categories: 20-21, 22-24, 25-27 and 28-30 years old. The patterns observed within these groups were essentially the same as those shown in Table 3.4. Also, in another table not included here, the relationship between undergraduate major and current use was examined for all men who had ever attended college. With social sciences, fine arts and humanities distinguished from other majors, it was found that current use was higher for those in the social sciences, fine arts and humanities category for all drugs except cigarettes and heroin. The differences were small (on the order of one to three percentages points) for alcohol and opiates, but much larger for the other drugs where they ranged from 5 to 18 points. Both former and current college students were included in this analysis, and it is not known whether these differences are due to past or current influences of the college milieu. Nevertheless, the differences are consistent, and they agree with the findings of other studies of college populations.

Current Family Status

In Chapter 2 it was found that the current family status of the men in the sample was strongly related to lifetime use of drugs. The same relationship holds for current use of drugs (Table 3.5). Once again, the highest percentages of use are observed for those men living with women to whom they were not married. They are followed by those living independently and the men still living in the parental home. The married men living with their wives show the lowest percentage of current use for every drug except cigarettes and alcohol. Even among these men one-fourth are currently using marihuana, and the percentages for the other drugs are not negligible.

Employment Status

Employment status also appears to be linked to current use. Comparison of the full-time workers (30 or more hours per week, n = 1980) with the unemployed (n = 213) shows the latter group to be, on the average, 12 percent higher in current use of all drug classes except alcohol. Two other employment status categories, student (n = 282) and part-time (less than 30 hours per week, n = 35) fall intermediate between the full-time and unemployed categories in the percentage of current users. For two drugs, sedatives and cocaine, those working part-time slightly exceed the other groups in current use.

Size of City of Current Residence

The city or town where a respondent was residing when he was interviewed was coded in terms of population size. In Table 3.6 the relationship between current use and city size is reported; the 36 men who were interviewed in locations outside the U.S. are included in a separate category because size of city was not coded for them.

For all drugs except cigarettes and alcohol, current use varied directly with city size. This positive trend is quite evident for marihuana; for example, 53 percent of the men residing in cities of one million or more were currently using this drug in comparison with only 28 percent of the men living in communities of less than 2,500.

Table 3.5. Current Use by Current Family Status (Percentages)

Drug	Total	CURRENT FAMILY STATUS: Married, Living With Spouse	Coupled, Living With Partner	Independent	Living In Parental Home
n	2510	1309	120	796	285
Cigarettes	60	62	69	58	47
Alcohol	92	91	96	94	87
Marihuana	38	25	68	56	38
Psychedelics	7	3	17	14	7
Stimulants	12	6	32	20	6
Sedatives	9	5	26	14	7
Heroin	2	1	11	2	2
Opiates	10	8	16	13	9
Cocaine	7	2	24	13	7

Table 3.6. Current Use by Size of City of Residence at Time of Interview (Percentages)

	Total[1] 2,510)	Outside U.S. (36)	1,000,000 Or More (146)	100,000 Plus (631)	25,000 Plus (575)	2,500 Plus (757)	Less Than 2,500 (352)
Cigarettes	60	64	57	61	58	59	62
Alcohol	92	97	92	93	93	91	88
Marihuana	38	36	53	44	42	32	28
Psychedelics	7	19	7	8	8	8	4
Stimulants	12	11	12	14	13	10	9
Sedatives	9	14	12	11	10	8	5
Heroin	2	6	4	3	1	1	1
Opiates	10	14	15	11	11	9	6
Cocaine	7	11	12	9	7	6	4

[1]Total includes 13 cases where size of city is unknown.

Table 3.7. Current Use by Lifetime Extent of Use (Percentages)

Drug	Total Users	EXTENT OF USE				
		Experimental	Light	Moderate	Heavy	Heaviest
Alcohol	95	52 (93)[a]	92 (491)	95 (318)	98 (599)	98 (933)
Marihuana	69	34 (423)	74 (231)	79 (227)	93 (501)	--
		Quasi-Medical	Experimental		Light	Heavy
Stimulants	43	24 (108)	27 (207)		50 (242)	70 (132)
Sedatives	44	37 (99)	27 (177)		56 (158)	68 (74)
Opiates	33	35 (286)	17 (300)		48 (145)	75 (48)
		Less Than 10 Times	10 To 99 Times	100 To 999 Times		1000 Or More Times
Cigarettes	86	[b] (231)	24 (249)	48 (260)		89 (1471)
Psychedelics	34	22 (291)	46 (192)	49 (57)		60 (10)
Heroin	31	11 (72)	54 (41)	41 (17)		50 (18)
Cocaine	51	41 (214)	66 (103)	63 (24)		64 (11)

[a]Numbers in parentheses represent the number who have ever used in the category.

[b]Information not obtained in interview.

Though small relative to marihuana, the percentages of current users for the other drugs, especially heroin, opiates and cocaine, also display pronounced positive relationships with city size. The divergent percentages for the respondents who were located outside of the U.S. may reflect nothing more than the instability of percentages based on only 36 cases.

Current Use and Extent of Use

Finally, current use, defined as use within 1974-75, will be examined in terms of various measures of lifetime extent of use. The order in which the drugs are presented varies from other tables because of differences in the measures of extent of use.

The data in Table 3.7 indicate that there is a positive relationship between the extent of lifetime use and current use; the percentages for current use increase with the extent of use. This pattern is marked for marihuana, and equally marked for stimulants, sedatives and opiates, if quasi-medical use is ignored.

The same pattern is observed for cigarettes, psychedelics and, with minor reversals, for heroin and cocaine. In general, the inference is clear: the more a man had used a drug in the past, the more likely he was to be using it currently.

This discussion of current use may be concluded with a brief comment on a finding implicit in Table 3.1. If the percentage of current users of a drug, in the columns based on any use of it, is subtracted from 100, the result is the percentage who implicitly claim to have quit using the drug. Thus, 14 percent of the cigarette smokers have not smoked within the last year, 5 percent of alcohol users have not used it within the last year, and in these terms 31 percent of the marihuana users have quit. Obviously, the percentages are highest for the drug classes showing the lowest extent of current use. Cocaine ranks high in the percentage of lifetime users who were current users.

Whether or not the lack of continuity in use of these drug classes may be regarded as an indication the men have quit using them is an important question, and it is one not considered in this initial report. Men who used a drug class 10 or more times, but who indicated their most recent use was more than one month prior to the interview were queried concerning whether or not they believed that they had quit using that drug. Preliminary analysis of this information suggests that most of those who were not current users (over 90 percent for all classes, except alcohol where the figure is 80 percent) perceive themselves as having quit. Further analysis will allow a description of the "quitters" in more detail in order to determine the correlates and, hopefully, the causes of quitting.

4 Estimates of Drug Use in the Population of Young Men

The data presented in this report pertain to the 2,510 men who were interviewed. However, the major questions of interest relate to the population of young men from which the sample was drawn. While it is of interest that 55 percent of the men who could be located and interviewed indicated that they had used marihuana, a more important question is: How many of the approximately 19,000,000 men between the ages of 20 and 30 in the United States have used marihuana? Obviously, a similar question may be posed for each of the drug classes.

If all of the 3,024 men in the sample, or all of the 2,981 men capable of being interviewed, had been located and interviewed, the task of making projections to the population of young men would not be problematic. The original sample was randomly selected and was representative of all young men in the country; if all of them had been interviewed, sampling error could have been handled by establishing confidence limits around the percentages of use observed in the sample. In this event, one would be reasonably certain that the true percentage

Table 4.1. Estimates of Drug Use in the Total Population of Young Men 20-30 Years Old in 1974, on the Assumptions: a) that the Interviewed Sample is a Random Sample of the Population; b) that None of the Noninterviewed Men Used Each Drug; c) that All of the Noninterviewed Men Used Each Drug (Percentages)

	Observed Percent of Use In Sample	A 95% Confidence Limits	B Assuming No Others Used	C Assuming All Others Used
Tobacco	88	87-89	74	90
Alcohol	97	96-98	82	97
Marihuana	55	53-57	46	62
Psychedelics	22	20-24	18	34
Stimulants	27	26-29	23	39
Sedatives	20	19-22	17	33
Heroin	6	5- 7	5	21
Opiates	31	29-33	26	42
Cocaine	14	13-15	12	28

of use of a particular drug class in the population was within those limits. However, only 84 percent of the target sample was interviewed, and literally nothing is known about the drug use of the 471 men who were not interviewed.

Various assumptions can, however, be made about their drug use in order to make inferences about drug use in the population of young men. The percentages shown in Table 4.1 were calculated on the basis of three different assumptions. Shown in the first column are the percentages of use reported by the 2,510 men who were interviewed. Column A is based on the assumption that these 2,510 men were a random sample from the population of approximately 19,000,000 men between the ages of 20 and 30 in the United States, and the percentages reflect the 95 percent confidence limits within which the true population percentages would then lie.

There were 471 men who were not interviewed; if one assumes that none of them had used any of the drugs, the percentages for the entire sample (N = 2,981) would be those shown in Column B in Table 4.1. On the other hand, if one makes the opposite assumption, that all of the 471 missing men had used all of the drugs, the percentages would then be those shown in Column C. The confidence limits around these estimates would be of the same order of magnitude as those in Column A.

The assumption on which Column A is based is known to be false, and the assumptions on which Columns B and C are based are, of course, highly unrealistic. Nevertheless, the findings are instructive; this is especially true for the minimum estimates given in Column B for such drugs as heroin and cocaine. The most conservative estimate is that 5 percent of the young men in the United States have used heroin, and 12 percent have used cocaine. The upper limits for these drugs, as shown in Column C, are highly improbable. For all of the other drugs the ranges given are undoubtedly too wide, but they might be useful as rough guides for policy makers.

The population represented by the sample in this study was almost 19,500,000. The death rate in the sample (36/3,024, or .012) is probably an underestimate of deaths in the population of young males because this population count is based on the 1960 Census when the age range of the men was 5 to 15. Presumably some males died before reaching age 18, an age achieved by all of the men in the original sample. On the basis of these figures, it is estimated that, at the time the interviews were completed, the population represented by the sample was approximately 19,200,000. A better estimate of the population of young males is provided in the Census Bureau's Current Population Reports (No. 541, Series P-25, February, 1975). The estimate for males age 20 to 30 inclusive, was 18,974,000 as of July 1, 1974; this figure includes armed forces overseas. For practical purposes, therefore, the total sample, excluding the deceased, may be regarded as representing approximately 19 million men.

If one uses that figure, the percentages in Column B translate into approximately 950,000 young men who have used heroin and 2,300,000 who have used cocaine. For marihuana, a crude estimate is that 8,700,000 to 11,800,000 have used it.

More accurate estimates can be made by taking into account the known characteristics of the men who were not interviewed. Unfortunately, only limited data were available regarding these men, because Selective Service supplied only such information as was needed to locate prospective respondents. Included were two variables that were found to be related to drug use in the interviewed portion of the sample. One was year of birth. The other was the size of the city in which the respondent had lived most of the time to the age of 18. For the noninterviewed men the city of residence at age 18 and its size are known. Table 4.2 was constructed on the assumption that for the men who were interviewed, the city of residence to age 18 was the city of residence at age 18.

In this table the interviewees are compared with the noninterviewed men in terms of year of birth and city size. In Panel B those cells where the entry is higher for the noninterviewed men than the corresponding entry for those interviewed are underlined. These cells are clustered in the upper left portion of the table; in other words, failures to obtain interviews were more common among the older men and among men from the larger cities.

It will be recalled that city size was directly, and age inversely, related to drug use. The older men were less likely to have used most of the drugs, but men from large cities were more likely to have used them. Thus, the two relationships presumably work in opposite directions for the noninterviewed men, and to some extent cancel out each other. One would, therefore, expect the rates of drug use among the noninterviewed men to be roughly equal to the rates among the interviewed individuals.

Table 4.2. Distribution of Interviewed and Noninterviewed Men By Year of Birth and City Size (Rate Per 1000)

CITY SIZE	YEAR OF BIRTH 1944-46	1947-49	1950-52	1953-54	Total
A. Interviewed Sample (2510)					
1,000,000 or More	16	22	22	15	75
100,000-999,999	51	64	73	55	243
25,000-99,999	37	47	62	39	186
2,500-24,999	60	84	82	64	291
Less Than 2,500	43	53	50	36	182
Outside U.S. or Unknown	8	6	6	6	24
Total	216	276	295	214	1000
B. Not Interviewed (471)					
1,000,000 or More	47	47	30	6	130
100,000-999,999	89	104	66	34	293
25,000-99,999	51	47	36	30	163
2,500-24,999	49	79	53	25	206
Less Than 2,500	66	38	38	23	166
Outside U.S. or Unknown	8	13	15	6	42
Total	310	327	238	125	1000
C. Expected Number of Marihuana Users Among Noninterviewed					
1,000,000 or More	13.2	16.0	9.7	2.4	
100,000-999,999	18.5	31.4	22.3	10.4	
25,000-99,999	9.8	11.9	11.0	7.3	
2,500-24,999	9.2	18.9	15.0	7.6	
Less Than 2,500	7.4	7.0	10.3	5.8	
Outside U.S. or Unknown	1.6	2.4	3.1	0.6	
Total	59.7	87.6	71.4	34.1	252.8

Precise estimates, however, can be obtained and are shown in Panel C of Table 4.2. The rate of marihuana use observed among the 40 men in the upper left cell of Panel A was multiplied by the number of men, 22, in the corresponding cell of Panel B, to arrive at the figure in the comparable cell in Panel C. This procedure was followed for each of the 24 cells in the table, and resulted in the estimate that, had the 471 missing men been interviewed, 253 of them would have reported use of marihuana.

The same procedure was used for each of the other drugs, and the results are shown in Table 4.3. Unlike the earlier tables, in which the percentages were rounded to two places, three places were retained in this table to show how small the differences are. The expected rates of tobacco and alcohol use among the noninterviewed men are higher than among the ones interviewed, but by less than one percent. For heroin the expected rate is identical to the one observed, and for all other drugs the expected rates are slightly lower; the largest difference is 1.7 percentage points for psychedelics.

In the final two columns of Table 4.3 the estimated cases are added to the observed cases, and the percentages that would have been obtained for the total sample of 2,981, if these estimates are accurate, are shown. The largest difference between these percentages

Table 4.3. Estimated Rates of Drug Use, and Numbers of Users

A. Observed and Estimated Rates of Drug Use

	Observed Use In Interviewed Sample (2510)		Estimated Use In Noninterviewed Men (471)		Estimated Use In Total Sample (2981)	
	n	Percent	n	Percent	n	Percent
Tobacco	2211	88.1	419	89.0	2630	88.2
Alcohol	2434	97.0	458	97.2	2892	97.0
Marihuana	1382	55.1	253	53.7	1635	54.8
Psychedelics	550	21.9	95	20.2	645	21.6
Stimulants	689	27.4	123	26.1	812	27.2
Sedatives	508	20.2	93	19.7	601	20.2
Heroin	148	5.9	28	5.9	176	5.9
Opiates	779	31.0	141	29.9	920	30.9
Cocaine	352	14.0	63	13.4	415	13.9

B. Estimated Numbers of Men Who Have Used (In Thousands)

	Lower Limit	Most Probable Figure	Upper Limit
Tobacco	16,530	16,720	16,910
Alcohol	18,240	18,430	18,620
Marihuana	10,070	10,450	10,830
Psychedelics	3,800	4,180	4,560
Stimulants	4,940	5,130	5,510
Sedatives	3,610	3,800	4,180
Heroin	950	1,140	1,330
Opiates	5,510	5,890	6,270
Cocaine	2,470	2,660	2,850

Table 4.4. Estimated Rates of Current (1974-75) Drug Use, and Numbers of Use

A. Observed and Estimated Rates of Current Drug Use

	Observed Use In Interviewed Sample (2510)		Estimated Use In Noninterviewed Men (471)		Estimated Use In Total Sample (2981)	
	n	Percent	n	Percent	n	Percent
Cigarettes	1494	59.5	282	59.9	1776	59.6
Alcohol	2301	91.7	433	91.9	2734	91.7
Marihuana	960	38.2	171	36.3	1131	37.9
Psychedelics	186	7.4	29	6.2	215	7.2
Stimulants	295	11.8	49	10.4	344	11.5
Sedatives	224	8.9	38	8.1	262	8.8
Heroin	46	1.8	8	1.7	54	1.8
Opiates	255	10.2	44	9.3	299	10.0
Cocaine	178	7.1	29	6.2	207	6.9

B. Estimated Numbers of Men Who Used in 1974-75 (In Thousands)

	Lower Limit	Most Probable Figure	Upper Limit
Cigarettes	10,980	11,320	11,670
Alcohol	17,230	17,420	17,610
Marihuana	6,880	7,200	7,520
Psychedelics	1,200	1,370	1,540
Stimulants	1,980	2,180	2,390
Sedatives	1,480	1,670	1,860
Heroin	250	340	440
Opiates	1,690	1,900	2,110
Cocaine	1,140	1,310	1,480

and those observed in the sample is three-tenths of a percentage point for marihuana and for psychedelics. Rounded to two digits, the percentages in the two columns are identical.

The estimates in the last column of Table 4.3 are the best that can be made from the data currently available in this study; they are based on all of the information available about the men who were not interviewed, namely, year of birth and residence at age 18, when the men registered with Selective Service. An additional variable, the geographical area in which the men resided, will be employed in later analyses. If region is found to be strongly related to drug use, it could change the estimates presented in this chapter, but it is anticipated that such changes would be minimal. It may be noted that the rate of use among the noninterviewed men would have to differ from that among the men interviewed by almost five percentage points to change the rate for the entire sample by one percentage point.

On the basis of this analysis it was concluded that the confidence limits shown in Column A in Table 4.1 may be used as inclusive of the true percentages of lifetime use of drugs among the 19 million men who were 20 to 30 years old in 1974. These limits were applied to produce the first and third columns of Panel B in Table 4.3. The middle column is based on the first and third columns in Panel A, rounded to two digits.

In short, the data in this table show that, according to the best estimates available, more than 1,000,000 men in the 20-30 year range have used heroin, over 2,500,000 have used cocaine and more than 10,000,000 have used marihuana

The same procedure was used to estimate current use (use in 1974-75), and the results are presented in Table 4.4. Once again, the estimates for use of cigarettes and alcohol among the men who were not interviewed are slightly higher than the rates observed among the men who were interviewed; for all other drugs the rates are slightly lower. When the observed and estimated numbers are combined to provide an estimate for the entire sample for a particular drug, the estimate is very similar to the percentage observed in the portion of the sample that was interviewed; in fact, when the figures are rounded to two decimal places, they are identical.

To construct Panel B, 95 percent confidence limits were used to estimate the range within which the true number of users of these drugs in 1974-75 probably lies. At least a quarter of a million men in the 20 to 30 age range used heroin in this period, and it is more likely that the figure is one-third of a million. For most of the other drugs, the most probable figures fall between one and two million although the estimate is 7 million for marihuana, 11 million for cigarettes and 17 million for alcohol.

5 The Drug Epidemic

Historically, the term epidemic has been used in reference to the extensive and rapid spread of an infectious disease, such as typhoid fever, that had pathological consequences both for the individuals who contracted it and for the communities in which they lived. Recently, the term has been used to describe the spreading use of drugs, particulary heroin.

Many knowledgeable individuals have suggested that a heroin epidemic began in the United States in the 1960s. Employing the year of first heroin use reported by patients in treatment programs, Jaffe (1973) and DuPont and Greene (1973) have characterized the rising use of heroin as an epidemic, dated its onset as about 1965, and set its peak between 1968 and 1970. These investigators also suggested that there may have been some variations by region in the timing of the epidemic. Their data indicated that the spread of heroin declined in the late 1960s or early 1970s, but because their respondents were patients in treatment or samples selected on a nonrandom basis, their evidence was by no means conclusive.

While it is questionable whether the analogy of a disease is appropriate for drug use, some of the concepts of epidemiology are useful in an effort to describe patterns of usage. The question of an epidemic of drug use refers to an historical issue, not one of respondents' maturation. However, both historical and maturational changes are reflected in the data, because the sample in this study includes eleven birth cohorts. In this chapter data are analyzed to assess the incidence and prevalence of drug use and the timing of changes within the sample of young men interviewed in this study.

INCIDENCE OF DRUG USE

The data on the incidence of new users are presented in the first two tables in this chapter. The number of new users appearing in each year from 1953 to 1974 is shown separately for the drug classes in Table 5.1. For example, four men smoked cigarettes by 1953, and nine more did so in 1954. These data are presented in percentages in Table 5.2; the base for percentaging in each column is the total number of men who reported any use of the drug in their lifetime.

It must be noted that the zero entries in these tables do not mean that these drugs were not being used in the United States. Such an inference could be drawn only if the respondents had been selected from the entire age range in the population. Further, the low rates of incidence in the earlier years do not necessarily mean that incidence rates were low in the population of the United States in those years; for this sample they were low in the early years in part because many of the men were too young to try the drugs. For example, some of the older men in the sample had used cigarettes and alcohol before the younger men were born. There is an increase in the number of new users of cigarettes and alcohol in the 1960s, but this is not to be seen as an epidemic because use of these substances has been widespread in American society for many years. The appearance of new users in this sample merely means that the men were reaching the age at which use of these drugs was common.

This may also be true for the other drugs, although not necessarily to the same extent. In other words, the figures in Tables 5.1 and 5.2 may reflect not only the age of the men in the sample, or maturation effects, but also the influence of historical changes,

Table 5.1. Number of New Cases of Use By Drug and First Year of Use

	Cigarettes	Alcohol	Marihuana	Psychedelics	Stimulants	Sedatives	Heroin	Opiates	Cocaine
1953 or earlier	4	15	0	0	0	0	0	1	0
54	9	16	0	0	0	1	0	9	0
55	9	14	0	0	0	1	0	6	0
56	14	27	1	0	0	0	0	5	0
57	24	45	1	0	1	1	0	8	0
58	27	62	0	0	0	1	0	6	0
59	60	94	1	0	1	0	0	7	0
1960	103	163	3	0	2	2	0	8	0
61	93	134	7	1	5	2	0	9	0
62	109	190	11	0	9	3	1	18	0
63	114	185	19	0	5	5	2	16	2
64	132	229	29	2	14	1	1	15	0
65	134	222	54	6	25	13	2	28	3
66	171	246	82	17	38	18	6	29	8
67	157	213	136	31	49	24	8	47	7
68	160	190	197	55	75	55	8	76	22
69	166	155	218	113	106	62	24	100	35
1970	84	111	212	112	101	64	27	104	49
71	71	59	149	82	92	72	26	94	49
72	65	44	140	63	83	82	26	90	76
73	26	9	81	40	50	63	10	73	71
1974 (or 1975)	11	7	40	26	29	37	5	22	29
Unknown	1	4	1	2	4	1	2	8	1
TOTAL	1744	2434	1382	550	689	508	148	779	352

Table 5.2. New Cases of Use by Drug and First Year of Use in Percentages

Year of First Use	Cigarettes (1744)	Alcohol (2434)	Marihuana (1382)	Psychedelics (550)	Stimulants (689)	Sedatives (508)	Heroin (148)	Opiates (779)	Cocaine (352)
1953 or earlier	*	1	0	0	0	0	0	*	0
54	1	1	0	0	0	*	0	1	0
55	1	1	0	0	0	*	0	1	0
56	1	1	*	0	0	0	0	1	0
57	1	2	*	0	*	*	0	1	0
58	2	3	0	0	0	*	0	1	0
59	3	4	*	0	*	0	0	1	0
1960	6	7	*	0	*	*	0	1	0
61	5	6	1	*	1	*	0	1	0
62	6	8	1	0	1	1	1	2	0
63	7	8	1	0	1	1	1	2	1
64	8	9	2	*	2	*	1	2	0
65	8	9	4	1	4	3	1	4	1
66	10	10	6	3	6	4	4	4	2
67	9	9	10	6	7	5	5	6	2
68	9	8	14	10	11	11	5	10	6
69	10	6	16	21	15	12	16	13	10
1970	5	5	15	20	15	13	18	13	14
71	4	2	11	15	13	14	18	12	14
72	4	2	10	11	12	16	18	12	22
73	1	*	6	7	7	12	7	9	20
1974 (or 1975)	1	*	3	5	4	7	3	3	8
Unknown	*	*	*	*	1	*	1	1	*
TOTAL	101%	102%	100%	99%	100%	99%	99%	101%	100%

Percentages are based on all men who have ever used a drug.

*Less than half of one percent.

particularly in the prevalence of drug use in the general population. Because of the restricted age range in the sample, information on the extent of drug use in the population of the United States must be derived largely from other sources.

For this reason and others that will appear later, the next few pages should be read as simply describing data for this sample, not as a description of an epidemic. In the next section, after further groundwork has been laid, the inferences that can be drawn about the drug epidemic in the general population will be discussed.

For the reader's convenience, the largest figure in each column is underlined in Tables 5.1 and 5.2. With the exception of alcohol, these figures are found in the four-year period, 1969 to 1972. The peak year for marihuana and psychedelics was 1969, whereas for sedatives and cocaine the new cases peaked in 1972.

If one temporarily ignores cigarettes and alcohol, it is apparent that in this sample use of all of the other drugs was minimal until the mid-1960s. Noticeable increases in new cases began around 1963 for marihuana, in 1965 for stimulants, sedatives, and opiates, in 1966 for psychedelics and heroin and in 1968 for cocaine.

The five consecutive years in which the largest percentage of new users appeared in each drug category are bracketed in Table 5.2. Of the men who ever used cigarettes, 45 percent are included in these peak years, 1965-1969. For alcohol the peak years are 1964-1968, and 45 percent of the new cases appeared in this period. With the exception of the opiates, a category that includes a sizable number of quasi-medical users, approximately two-thirds to four-fifths of the new users in the other drug classes are found in the peak five-year periods. Also of interest is the fact that these peak years are essentially the same--1968-1972 or 1969-1973--for all of these drugs. The new users of marihuana, psychedelics, stimulants and, to a slightly lesser extent, of opiates, are concentrated in the years 1968-1972, and the peak period was 1969-1973 for the sedatives, heroin, and cocaine.

As may be seen in Table 5.1, for all of the drug categories there was a decline in the number of new cases in 1974, and for most drug classes a steady decline in the number of new cases in the sample is evident in the four or five years following the peak year. However, in the case of sedatives, heroin and cocaine there are only one or two years of declining numbers following the peak year.

The median age at first use of each drug or drug class is shown in Table 5.3. There is little variation across the eleven cohorts in the median age at which cigarettes and alcohol were first used. In each cohort one-half of the men who ever used alcohol did so for the first time by the age of 15 or 16. There is some variation among the cohorts in the median age of first use of cigarettes, but the range is restricted to the ages of 15 to 17. While the median age at which initial use of cigarettes and alcohol occurred is remarkably similar for the eleven age cohorts, this is not the case for the other drugs or drug classes. Rather, there is a marked downward trend in the medians from the oldest to the youngest cohorts. If the median ages are translated into dates, the resulting years for first use of cigarettes and alcohol range from 1960 to 1969 in the eleven cohorts, but for marihuana and psychedelics these years are confined largely to the 1968 to 1971 period. The range for heroin and cocaine is essentially restricted to the years 1970 to 1972.

The data in Table 5.3 cannot be taken as proof of an earlier age of onset of use in the younger cohorts because limits are set on median age by the age of the cohorts. The men born in 1954 were 20 years old in 1974, when most of them were interviewed; consequently, the median age for them could not exceed 20. To some extent, higher median ages in the older cohorts might reflect only the fact that they were older, and this permitted higher medians to appear.

The peaking of new cases of use as noted in Table 5.1 could occur in a number of ways, which are not mutually exclusive:

1. An increase in new cases could be produced by higher proportions of users in the younger cohorts, even if the size of the cohorts remained constant. It was seen in Chapter 2 that this factor is present; some of the increase observed in Table 5.1 is due to the fact that higher percentages of the younger cohorts than of the older cohorts used drugs.

2. An increase in new cases could be produced if succeeding cohorts were larger in number, even if the age at first use did not change from one cohort to another and the proportion of users in the cohorts remained constant. As noted in Chapter 2, there are more men in the younger

Table 5.3. Median Age at First Use of Drug Among Users by Year of Birth

Year of Birth	Cigarettes	Alcohol	Marihuana	Psychedelics	Stimulants	Sedatives	Heroin	Opiates	Cocaine
1944	17	16	26	25*	20	23	**	21	**
45	17	16	24	24	23	26	**	22	26
46	17	16	21	23	21	22	22	22	24
47	17	16	21	22	20	22	22*	21	23
48	18	16	20	21	21	21	21	21	22
49	17	15	20	20	20	21	20*	20	22
1950	17	15	19	20	20	20	20	20	22
51	17	15	18	19	19	20	19	19	21
52	17	15	18	18	19	19	19	18	19
53	16	15	17	17	18	18	18	18	19
54	15	15	17	17	17	18	18	17	18

*Each of these medians is based on 9 cases, so the medians may be unstable.

**The numbers of users of heroin in the two oldest cohorts are 4 and 2; medians would be 22 and 22. There were 6 cocaine users in the oldest cohort; the median would be 26.

cohorts than in the older; thus, this factor was also operating. Part of the increase in the number of new cases in the late 1960s was merely a reflection of the baby boom in the early 1950s.

3. If the number of persons in successive cohorts is identical and the proportion using drugs remains the same, but the age of first use drops between succeeding cohorts, there will be an increasing number entering the ranks of users in a given year or at least within a brief span of years. If, for example, each cohort usually produces a given number of new users by the age of 16, but then in a subsequent cohort that number is produced by age 15, there will be a year or a span of a few years in which many more new users appear; in one brief period the persons who used a drug by the age of 15 in one cohort would be added to those who used it by the age of 16 in the previous cohort. The data in Table 5.3 on median age suggest, but do not demonstrate, that this factor was operating.

4. In theory, the same peaking could be produced if the age at first use increased between succeeding cohorts, with the peak occurring later than in the first case. There is no hint of such a factor in these data, and it need not be considered further.

5. All of the previous possibilities involve differences between cohorts. Without such differences an increase in new cases could be produced by historical changes that affect alike all who are living at the time a change occurs, or at least all who have entered the age of risk, and have not yet left it.

There are, then, at least five different ways in which the observed increase in new cases of drug use in this sample could have occurred. Only the fourth can be eliminated. The first and second are known to have operated, and the data on median age suggest, and additional data will establish, that the third also operated. It will further be seen that there is reason to believe that the fifth was a factor, too.

Further analysis is required before the relative importance of these factors can be established, but they must be kept in mind in any attempt to generalize from these data to the issue of an epidemic in the general population. A beginning can be made toward such generalization, and the effect of the changing age at onset can be clarified by comparing and contrasting the year of onset of use for alcohol and marihuana.

The cumulative percentages for new cases of alcohol use, based on the total number of men in the sample, are presented in Table 5.4 for each of the eleven cohorts. Comparable percentages for new cases of marihuana use are shown in Table 5.5. The tables may be compared with each other. Within each table, either cohorts or years of first use can be compared, and it should also be noted that comparisons of diagonals are legitimate and useful. To illustrate, figures on a selected diagonal are underlined in each table, and these represent the age at first use, which may be computed by subtracting the year of birth from the year of use. The diagonals are for age 17, and they enable one to compare the cohorts on the percentage who had first used alcohol or marihuana at or before that age.

The table for alcohol should be examined first, and the comparison should be between columns. If one allows for sampling fluctuation, any two adjacent columns are essentially similar, except that the one on the right has been displaced one space downward. In other words, if each cell in a column is compared with the cell immediately below and to the right of it, the percentages are approximately equal.

This means, of course, that the cohorts are similar to each other with respect to first use of alcohol. By age 10, from 5 to 10 percent in each cohort had used alcohol, and the percentage increased fairly regularly in succeeding years. By age 17, highlighted by the underlined diagonal in the table, the percentages that have used alcohol range between 69 and 87. The increases are smaller in later years in each column, but this is clearly because there were few men left who had not already used alcohol.

The peak year for new cases of alcohol use in Table 5.1 was 1966. If the row for 1966 is examined in Table 5.4, it will be observed that even the two oldest cohorts were still furnishing a few new cases, at age 21 and 22, and that all other cohorts were contributing sizable numbers, as evidenced by the fact that the percentages for 1966 average about 11 points higher than for 1965. The largest increases between 1965 and 1966 are for the men born in the early 1950s.

Table 5.4 is not subject to the potential weakness of Table 5.3, in which median ages are presented, because comparisons can be made in terms of ages that all the cohorts have reached. In each column in Table 5.4 the first cell that reaches 50 percent marks the age at which half of the cohort, not merely half of the eventual users, had begun use, and it may be seen that these cells fall roughly on a diagonal. Those for the youngest cohorts are slightly above the diagonal suggested by the oldest cohorts; this indicates a tendency for first use of alcohol to be slightly earlier in the younger cohorts.

In terms of the five ways in which an increase can be produced, then, the peaking of new cases of alcohol use in Table 5.1 is, to a slight extent, due to a tendency toward earlier use in the younger cohorts. There is no hint of an increased percentage of use in the younger cohorts; indeed, there could not be much of an increase because nearly all of the men eventually used alcohol. Further, there is no hint of any historical change that affected all cohorts. Almost all the effect of the younger men reaching the age at which alcohol use could be expected to begin.

Since there is no question of an epidemic of alcohol use, the similar patterns for the cohorts in Table 5.4 establish that the increase in new cases of alcohol use observed in Table 5.1 is almost entirely a maturational effect. A certain proportion of new cases could be anticipated at each age, and as each cohort moved through that age, it contributed its expected number of new cases. The same maturational effect, then, can be expected to account at least partially for the increases observed in Table 5.1 for the other drugs.

However, new cases of marihuana use by cohort are shown in Table 5.5, and it is apparent that the maturational effect, which applies to all cohorts, was not the only cause of the increase in marihuana use noted in Table 5.1. The same comparisons as were made for alcohol in Table 5.4 are needed.

While comparison of the cohorts on alcohol use revealed that the percentages were approximately equal when any cell was compared with the one to its right and below it, in the table for marihuana the percentage in the latter cell is usually higher than in the former. Indeed, in the lower rows of

Table 5.4. Year of First Use of Alcohol, by Birth Cohorts (Cumulative Percentages of Total Sample)

Year of First Use	n	YEAR OF BIRTH 1944 (174)	1945 (171)	1946 (196)	1947 (254)	1948 (223)	1949 (215)	1950 (234)	1951 (245)	1952 (261)	1953 (247)	1954 (290)
1953 or earlier		2	4	1	*	0	0	0	0	0	0	0
54		6	4	2	2	0	1	0	0	*	0	0
55		9	5	3	4	0	1	0	*	*	0	0
56		14	7	6	4	0	3	1	1	1	*	0
57		23	12	8	6	*	4	2	3	1	1	0
58		33	21	11	8	3	5	5	4	2	1	0
59		43	31	21	14	7	9	5	5	3	2	0
1960		68	46	32	24	13	13	8	8	4	3	2
61		78	59	43	33	21	20	9	10	5	4	3
62		83	73	59	44	35	31	15	13	8	6	4
63		90	83	69	61	47	41	22	21	9	9	5
64		91	88	83	71	64	55	34	33	16	13	9
65		94	91	89	82	76	71	49	46	26	19	12
66		95	94	94	89	88	81	67	59	40	31	19
67		96	97	94	92	91	91	77	77	53	45	32
68		96	98	95	94	94	93	87	81	73	60	46
69		98	98	95	95	96	95	92	90	82	76	63
1970		98	99	95	97	96	97	93	92	93	84	78
71		98	99	95	97	96	98	95	95	94	92	87
72		98	99	96	98	96	98	95	96	95	97	94
73		98	99	96	98	96	98	96	96	96	98	94
1974		98	99	97	98	96	98	96	97	96	98	95

*Less than half of one percent.

the table, the percentages increase from left to right; this was not observed for alcohol.

If the diagonals for age 17 are compared in the two tables, another major difference is apparent. For alcohol the percentages on the diagonal are approximately equal; there is a slight upward trend in the youngest cohorts, but for marihuana there is a clear trend toward higher percentages as one moves from the upper left to the lower right cells. These percentages change from 1 to 39 percent.

The point can be made another way. Choose any percentage under approximately 80 percent in the first column on the left in the alcohol table, and then look for the figure closest to it in the columns to the right. To locate these figures in the columns on the right in the alcohol table, one has to look eight or nine rows below the first percentage. If the same precedure is followed in the marihuana table, one has to move down only two or three rows over the eleven columns. Indeed, if one chooses to begin with a figure in the lower third of the first column, the cells that equal it in the other columns are likely to be in higher rather than lower rows. This is clear evidence that the age of onset of marihuana use was lower in the younger cohorts of this sample. Thus, the table on median age of onset was not misleading but accurately reflected a real change.

Therefore, the increase in marihuana use in the late 1960s partly resembles the increase in alcohol use, in that it reflects the maturational effect and the fact that the younger cohorts are larger. However, two additional factors, not apparent for alcohol, are observed for marihuana. In the younger and larger cohorts, the average age at onset was earlier, and the proportion of users was considerably higher in the younger than in the older cohorts.

This is, in part, a change in the earliest use of marihuana. In the youngest cohorts there were a few cases of use as early as age 9, 10 or 12, while there was only one case of use as early as 12 in the oldest cohorts. Nevertheless, the major change was not in the earliest age at which use was reported, but in the pattern within the cohorts. Among the younger men, the pattern has been one in which a few men used marihuana by the age of 12, and sizable numbers used it

Table 5.5. Year of First Use of Marihuana, by Birth Cohorts (Cumulative Percentages of Total Sample)

Year of First Use	n	YEAR OF BIRTH 1944 (174)	1945 (171)	1946 (196)	1947 (254)	1948 (223)	1949 (215)	1950 (234)	1951 (245)	1952 (261)	1953 (247)	1954 (290)
1953 or earlier		0	0	0	0	0	0	0	0	0	0	0
54		0	0	0	0	0	0	0	0	0	0	0
55		0	0	0	0	0	0	0	0	0	0	0
56		1	0	0	0	0	0	0	0	0	0	0
57		1	0	1	0	0	0	0	0	0	0	0
58		1	0	1	0	0	0	0	0	0	0	0
59		1	0	1	0	0	0	0	0	0	0	0
1960		2	0	1	0	0	0	*	0	0	0	0
61		2	0	2	0	0	*	*	*	*	0	0
62		3	1	3	1	1	1	*	*	*	*	0
63		5	2	4	3	2	1	1	1	*	*	0
64		6	4	5	5	4	4	1	3	1	*	0
65		7	5	10	8	6	7	5	4	5	2	0
66		9	10	15	13	10	10	10	6	6	5	2
67		13	13	25	19	18	18	15	11	10	9	4
68		14	17	30	30	30	28	26	18	18	17	9
69		17	19	33	37	41	40	41	33	26	28	15
1970		23	25	36	41	48	45	48	45	43	39	27
71		26	28	38	44	51	50	54	53	52	49	37
72		30	29	40	47	54	55	64	58	57	56	49
73		35	32	43	49	56	56	66	61	61	60	55
1974		39	34	44	49	57	56	66	62	64	62	59

*Less than half of one percent.

for the first time at the ages of 13, 14 and 15. In contrast, in the older cohorts there was little or no use prior to the age of 14, and few new cases appeared immediately thereafter. Thus, in the two youngest cohorts almost 50 percent of the men had tried marihuana by the age of 18, whereas this was the case for only two or three percent of the men in the two oldest cohorts.

The peak year for marihuana onset was 1969 (Table 5.1). All of the cohorts contributed to this peak (Table 5.5). Another noteworthy finding in Table 5.5, not observed in the corresponding table for alcohol, is that the oldest cohorts continued to contribute new cases of marihuana use after the peak year. Indeed, in the oldest cohort more than half of the eventual users began to use marihuana after 1969.

It is speculative, insofar as the available data are concerned, but consistent with other data, to suggest that there is a normal age range during which a drug has some probability of being tried, but before and after which the probability of trying it is low. For marihuana the data in Table 5.5 suggest that, during the years covered in this study, the "age at risk" began in the early teens. The fact that in the youngest cohorts the rate of increase in new cases seems to be declining in recent years suggests that the highest percentage will be in the low 60s, and few new cases will appear after the men reach the early twenties.

In short, though this is still speculation, it appears probable that if conditions had remained the same through their lifetimes, the percentage of marihuana users in the older cohorts would not have exceeded 15 or 20. Conditions did not remain the same; when they reached age 25, and the new cases should have declined, marihuana use had become common among their younger friends and acquaintances, the drug was easier to obtain, and taboos against its use had been weakened. In this changed climate, it is suggested, some men in their late twenties tried marihuana, at least on an experimental basis. If this is the case, this is an historical effect, noticeable only for the older cohorts, and it also contributed to the increase in marihuana use in the late 1960s.

Tables similar to 5.4 and 5.5 have been prepared for all of the other drug classes, but are not included in this report. The pattern for cigarettes closely resembles the one for alcohol, including the tendency toward a slightly earlier age at first use, but differing in that the proportion of users is lower in the younger cohorts. The patterns for psychedelics, stimulants, sedatives and cocaine resemble the one for marihuana; they show that the increases in use of these drugs, as noted in Table 5.1, reflect a number of influences: (1) a maturation effect; (2) use at earlier ages in the younger cohorts; (3) higher proportions of users in the younger cohorts; (4) the larger size of the younger cohorts; and (5) a slight historical effect observable in the older cohorts. The existence of this last effect, however, is less certain than for marihuana because new cases are less frequent in the late twenties for the older cohorts and there is even less basis for defining the age at risk for use of these drugs than for marihuana.

The pattern for heroin also resembles the one for marihuana, including the higher proportions of users in the younger cohorts, except that the proportion for the youngest cohort is smaller than for the four that precede it. Further, because heroin involves the smallest number of users, one can be less certain of percentages. The strongest statement that is justified is that there is nothing to suggest that the findings for heroin are different from those for marihuana.

The data for opiates present a few problems. First, 29 of the 779 men who have used opiates reported use at age eight or earlier, one of them at age one. This suggests inaccuracy in reporting age, or that some medical use was included; it will be recalled that about 40 percent of all opiate use was classified as quasi-medical. The trend toward an earlier age of first use in the younger cohorts is as strong as for the other drugs and is stronger than for cigarettes and alcohol. The trend toward a higher proportion of users in the younger cohorts is less marked than for marihuana, psychedelics and cocaine, or even for stimulants and sedatives, but as for heroin, the trend is present. What has been referred to as an historical effect in the older cohorts is not seen for opiates or heroin. While all of these reservations are essential, it remains true that the patterns for heroin and opiates clearly resemble the marihuana pattern more closely than the pattern for alcohol.

If one keeps in mind the extent to which the data are affected by the characteristics of the sample, especially the restricted age range, it is now possible to re-examine the data in Tables 5.1 and 5.2 to determine what they imply about a drug epidemic. While the maturational effect makes dating the start of an epidemic in the mid-1960s less precise than one might wish, data are available that

indicate it could not have started much earlier. The oldest cohorts had entered their twenties by 1965, and could have been using drugs before that year, but for most of the drugs they were not, or few were doing so (aside from opiates, where quasi-medical use accounts for much of the early use).

For marihuana, the slight increases in numbers to 1964 could be maturational effects, but by 1965 the earlier onset in the younger cohorts is apparent (Table 5.5). In these cohorts sizable increases are noticeable in the succeeding years; this was not the case for the older cohorts. The precise date for the beginning of the epidemic depends on the operational definition of "beginning," but 1965 seems the latest possible date for marihuana, and to date it a year or two earlier would not be unreasonable.

The picture is perhaps clearest for psychedelics. Only one man reported use before 1964, but the peak year was reached by 1969. If one bases the comparisons on the percentage figures in Table 5.2, rather than on the number of cases in Table 5.1, the patterns for stimulants and opiates are parallel to the one for marihuana, while psychedelics, sedatives, heroin and cocaine follow by about a year. If one wished to speak of an epidemic in terms of these four drugs, the beginning was in the 1966 to 1968 period.

The concept of a period of risk for drug use was mentioned earlier. In the case of alcohol, the age of entry into this period would have to be set no later than age 10; by that age more than 5 percent of the men were already using it in all but one of the cohorts (Table 5.4). It could be said that the period ends in the early twenties, by which age almost all of the eventual users had used alcohol, if the plausible assumption is made that the few nonusers are likely to remain total abstainers. This is not an important matter since it applies to so few men, but it does explain why the percentages of new users increase so little in the most recent years; there were few still at risk.

The picture is somewhat more complicated for cigarettes. In Chapter 2 it was shown that the proportion of each birth cohort who eventually used cigarettes decreased at a fairly steady rate from the oldest to the youngest. Reflecting a downward trend, the pattern for cigarettes differs markedly from the flat curve for alcohol, the U-shaped curve for heroin and the generally upward curves for the other drugs. Overall, 70 percent of the men reported cigarette use; consequently, the decrease in new cases of cigarette use in the early 1970s is not, as in the case of alcohol, due to the diminution of the group at risk.

It is conceivable that some of the men who had not used cigarettes by the time of the interview will do so in the future. Relevant to this possibility is the respondent's assessment of the likelihood that he would be using tobacco three years later. Of the nonusers, 96 percent indicated that there was "no chance" they would be using tobacco in any form in the future.

Of the men who eventually used cigarettes, 94 percent had done so by the age of 20, and all of the men in the sample were at least 20 years old at the time of the interviews. Thus, a sizable change in the incidence of cigarette use in this sample is unlikely. If one assumes that few nonsmokers will subsequently begin use of cigarettes, attainment of age 20 could be taken as the end of the period of risk. In addition, both in absolute numbers and in terms of the percentage at risk, the decrease in the number of men who began to use cigarettes in recent years is observed not only for the sample as a whole, but also for each of the younger cohorts. While speculative, the inference would appear to be warranted that in the early 1970s there has been an actual decline in the incidence of cigarette smoking among young men. One obvious interpretation is that some young men have heeded the warning of the Surgeon General concerning the health hazards connected with smoking.

The picture is not the same for the other drugs because the age at onset of use has been changing. In addition, there is less evidence to establish an upper age limit for the period of risk. For example, the percentage of men who have ever used marihuana is substantially higher among the younger men; 37 percent of the men who were 29 or 30 in 1974 had used marihuana in comparison with 62 percent of those between the ages of 20 and 24. Ranging only from 59 to 66, the percentages were similar for the five youngest cohorts, and the rate of increase was slowing. This suggests that a plateau in the range of 60 to 65 percent will be reached. Extrapolation of these data would not suggest substantially higher lifetime prevalence figures for men younger than those included in this study.

This, however, is not the case for median age at onset. Of the men who have used marihuana, the median age at first use is 19 for the entire sample, but the medians decrease regularly from 26 for the oldest cohort to 17 for the youngest. This is clearly a trend, and extrapolation of it leads to the prediction of even younger median ages for new

Table 5.6. Annual Prevalence of Drug Use, 1957-1974 (Percentages[1])

	Alcohol	Marihuana	Psychedelics	Stimulants	Sedatives	Heroin	Opiates	Cocaine
Before 1957	3	*	0	0	*	0	1	0
1957	4	*	0	*	*	0	1	0
58	6	*	0	*	*	0	1	0
59	10	*	0	*	*	0	1	0
1960	16	*	0	*	*	0	1	0
61	20	*	0	*	*	0	1	0
62	28	1	0	*	*	*	2	0
63	35	1	0	*	1	*	2	*
64	44	2	*	1	*	*	2	*
1965	53	4	*	1	1	*	2	*
66	63	6	1	2	1	*	3	*
67	70	11	2	4	2	1	3	*
68	78	17	5	6	3	1	5	1
69	84	23	6	9	5	1	7	2
1970	88	29	9	11	6	2	8	3
71	90	32	9	12	7	2	8	4
72	91	34	10	13	8	2	9	5
73	91	36	8	12	8	2	9	6
74	93	37	6	11	8	2	10	6
Lifetime Prevalence	97	55	22	27	20	6	31	14

[1]The percentages reflect use of a drug at least once in a calendar year.

*Less than one-half percent.

users in the future. There obviously is some lower limit, but the available data do not show a leveling as yet and thus do not suggest what the limit will be. The prediction of a younger median age at first use is consistent with the finding in several studies of younger men that many of them used marihuana at an early age. The pattern described for marihuana is also found, with minor variations, in all of the other drugs, and the same inferences seem to be justified.

A caveat is in order. To this point the number of new cases appearing in each calendar year has been presented. Yet, this is only part of the issue regarding the existence of an epidemic; other relevant questions concern the length of time those who used a drug continued to use it, as well as the extent of their use. Nor have data on regional variations been examined. Nevertheless, the data suggest that there was a drug epidemic in the latter part of the 1960s. With the exception of the sedatives and cocaine, the peak years for new cases of drug use were 1969 and 1970. Although not conclusive, the data on incidence provide some indications of a decline following the peak years. However, the incidence of new cases has not reverted to pre-epidemic levels.

ANNUAL PREVALENCE

Data on annual prevalence, or the percentage of the total sample who used each drug in each calendar year, are presented in Table 5.6 for the years 1957 to 1974. A man is counted in a given year if he used the drug at least once in that year. If shorter time periods such as months or seasons were used, the figures would be appreciably lower because many of the men used some of the drugs only a few times in a given year. For comparative purposes, the lifetime prevalence, or the percentage of the sample who ever used a drug prior to the time of the interviews, is also shown.

For two drugs, psychedelics and stimulants, the highest annual prevalence was approximately one-half of the lifetime prevalence. For heroin and the opiates it was only one-third of the lifetime prevalence, and for sedatives and cocaine the highest annual prevalence was about 40 percent of lifetime prevalence. In other words, more of the men who used these drugs quit using them, or used them more sporadically, than was the case for marihuana and alcohol. The highest figure for the annual prevalence of marihuana is 37 percent; this is two-thirds of the figure for lifetime prevalence. There is, then, a strong tendency for use of marihuana to continue once it is begun. This is even more true of alcohol, because the annual prevalence in the 1970s is approximately 90 percent, whereas the lifetime prevalence is 97 percent.

The patterns in Table 5.6 do not simply duplicate those observed regarding the incidence of new cases, for which lower figures were observed in the most recent years (Table 5.2). In terms of annual prevalence only the usage of psychedelics and stimulants shows a downward trend.

The prevalence figures for 1974 are as high as the peak years for all drugs except psychedelics and stimulants. Consequently, there is no basis to suggest that a decrease has occurred. For sedatives, heroin and cocaine the data may be taken as indicative of a leveling of usage, but could as easily be seen as plateaus on what could still be an upward trend. For alcohol, marihuana and opiates, 1974 was the peak year, and the data are clearly consistent with an upward trend.

HAS THE EPIDEMIC ENDED?

While the incidence of new cases has declined, there have been minimal or no decreases in annual prevalence from the peak years. Thus, the data do not permit one to conclude that the epidemic has ended for most of the drugs examined in this study. There are other reasons why this is the case. A number of facts suggest that marihuana was the key drug in the epidemic of the 1960s. Marihuana was the first of the drugs to reflect a higher incidence of use (Table 5.1). Further, data presented in Chapter 9 indicate that marihuana use was almost a necessary, though not a sufficient, condition for use of the other drugs. This assertion will be documented more fully in a detailed report in preparation, but it is noted at this point to explain the presentation of the data in Table 5.7 in terms of the extent of marihuana use.

It is generally recognized that drug use is transmitted largely through friendship networks, and it may be seen in Table 5.7 that use of marihuana by at least a few of the respondent's friends was almost universal when the men in this sample first used marihuana. In addition, 88 percent of the users indicated that when they initially used marihuana, it was obtained as a gift. The comparable percentages for the other drugs were: psychedelics, 59; stimulants, 62; sedatives, 63; heroin, 62; opiates, 43; and cocaine, 71.

The respondents were also asked: "What would you say the chances are that you will be

Table 5.7. Use by Friends, Availability, and Chance of Future Use of Drugs, by Extent of Marihuana Use (Percentages)

Percent Reporting:	n	Total (2510)	No Use (1128)	Extent of Marihuana Use: Experimental (423)	Light (231)	Moderate (227)	Heavy (501)
At least a few friends were using marihuana when R started		--	--	95	97	98	98
More than a few friends are now using:	Marihuana	48	18	41	69	76	94
	Psychedelics	14	4	5	16	22	39
	Stimulants	16	6	9	14	23	43
	Sedatives	13	5	8	11	16	36
	Heroin	3	1	1	*	5	7
	Opiates	6	4	4	6	7	17
	Cocaine	8	2	1	3	12	24
Would find it easy to get:							
	Marihuana	70	57	75	82	79	87
	Psychedelics	32	26	35	32	39	41
	Stimulants	41	36	45	40	45	46
	Sedatives	40	37	46	41	44	42
	Heroin	17	15	17	14	20	24
	Opiates	22	21	26	19	20	23
	Cocaine	20	16	17	18	26	30
At least some chance that in three years will be using:							
	Tobacco	66	58	71	72	74	72
	Alcohol	91	84	97	94	96	95
	Marihuana	38	4	31	72	75	91
	Psychedelics	8	*	1	5	11	31
	Stimulants	15	2	8	17	25	44
	Sedatives	14	4	10	13	22	34
	Heroin	2	*	*	1	4	8
	Opiates	14	8	10	11	14	29
	Cocaine	10	1	*	4	13	37

*Less than one percent.

using each drug, even occasionally, three years from now? Would you say there was no chance, a slight chance, a good chance, or a very good chance? How about (Drug)?" While these are subjective estimates of future use, 38 percent of the men indicated that there was at least a slight chance they would be using marihuana three years later. It is interesting that this figure is almost identical to the prevalence of marihuana use in 1974, 37 percent.

The respondents' estimate of the likelihood of future use of each drug or drug class is directly related to the extent of their marihuana use. This is particularly noticeable for marihuana; only 4 percent of the nonusers said there was any chance of use in three years, but the figures rise rapidly with extent of use to 91 percent for the heavy users. In Table 5.7 those who indicated there was even a slight chance of using a drug are included. If only those who reported the chance of marihuana use as "good" or "very good" are counted, the percentages in terms of extent of marihuana use would be nonusers, less than 1; experimental, 4; light, 27; moderate, 41; and heavy, 73. Therefore, one can infer that a sizable proportion of the men who have used marihuana intend to continue or resume use, and even 4 percent of those who have never used it recognize some chance of future use.

The implication is that there will continue to be a large reservoir of marihuana users, and nonusers may learn to use the drug from them. The possibility of such learning is apparent in the responses to the question: "How many of your current friends and acquaintances use each drug?" (Table 5.7). Again, it may be observed that the extent of prior use of marihuana is related to the likelihood that a man will report having friends currently using it. This holds true not only for marihuana, but for all the other drugs as well. Even among the nonusers, almost one in five reported that more than a few of his friends currently used marihuana, and one in twenty said he had friends who used stimulants and sedatives. Among users, substantially higher percentages report having friends using all of the other drugs, so that transmission of drug use through friendship networks is also a possibility for these other drugs.

The men were also asked how difficult it would be for them to obtain each of the drugs within a day if they wanted to do so and had sufficient funds. While 70 percent reported it would be easy to obtain marihuana, 40 percent indicated that stimulants and sedatives could be obtained easily, and 32 percent could obtain psychedelics easily. For heroin, other opiates and cocaine approximately 20 percent noted it would be easy to obtain these drugs.

It must also be remembered that the increased drug use in American society has necessarily changed the social climate surrounding drug use. In the years when few people were using marihuana, one had to overcome numerous obstacles prior to trying the drug. Today, a man who knows that at least one-third of his friends are currently using it and that more than one-half have tried it at one time or another can more readily justify experimenting with marihuana. The highest annual prevalence of marihuana use (37 percent) was reported in 1974. As a result, it would be incorrect to infer from the slight decline in the incidence of marihuana use that a downward trend has begun. Further, in view of the linkage between use of marihuana and other drugs, a similar position must be adopted regarding the other drugs (see Chapter 9).

Therefore, at least some of the conditions conducive to the spread of drug use currently exist to a far greater degree than was the case in the mid-1960s. Whether the existence of these conditions will, in fact, lead to more widespread use is not known. Yet, it is evident that the data provide no basis for a prediction that the prevalence of drug use will decline.

6 Attitudes, Motivations and Contexts

Thus far, attention has been focused on the extent and patterns of use of the various drugs. In this chapter some data are presented regarding the contexts of use, including the ways the drugs were obtained and administered. The reasons the respondents gave for using or not using the drugs are then examined, as well as data pertaining to the availability of drugs, the chances of future use, and some of the attitudes and opinions expressed by the respondents about three of the drugs, alcohol, marihuana and heroin.

Table 6.1. Methods by Which Drugs Were Obtained, Ever, First, and Usually (Percentages)

		Marihuana (1382)	Psychedelics (550)	Stimulants (689)	Sedatives (508)	Heroin (148)	Opiates (779)	Cocaine (352)
Free, as a gift	Ever	93	79	76	77	70	53	81
	First	88	59	63	66	63	48	71
	Usual	48	30	32	42	27	36	43
Bought from a friend or dealer	Ever	67	78	73	55	77	45	67
	First	12	40	32	23	36	29	28
	Usual	50	69	63	46	71	41	55
From respondent's own prescriptions	Ever	*	*	7	17	1	19	1
	First	0	0	3	7	0	16	*
	Usual	0	0	3	8	0	15	*
From a forged prescription	Ever	*	*	3	5	1	2	*
	First	0	0	*	1	0	1	*
	Usual	0	0	1	*	0	1	*
Stole the drug	Ever	2	1	3	5	7	3	1
	First	0	*	*	1	0	1	0
	Usual	*	0	*	2	1	1	*
Grew or made own supply	Ever	19	2	*	*	0	1	*
	First	*	*	0	0	0	*	0
	Usual	1	*	*	0	0	*	*
Some other way	Ever	2	1	3	7	2	8	1
	First	*	1	1	2	1	6	*
	Usual	*	1	1	2	1	6	1

*Less than one-half of one percent.

Methods of Obtaining and Using Drugs

For each drug except tobacco and alcohol, the respondents were asked to indicate all of the ways they ever obtained drugs when they used them on their own. Those who reported more than one way were asked how they obtained the drug the first time they used it and how they usually obtained it. Answer categories were provided, as shown in Table 6.1.

A majority of the users of all drugs had at times obtained drugs free, as a gift from other persons. This method was least frequently reported for the opiates and heroin. "Free as a gift" was the source of the drug on the occasion of first use for a majority of all users, except for opiates, and this was especially the case for marihuana (88 percent) and cocaine (71 percent). The percentages for whom this was the usual way of obtaining drugs average around 35 percent. However, these figures are inflated by the men who used the drug less than 10 times, and sometimes only once or twice; for them the first source of drugs was almost by definition the usual source.

Except for opiates, a majority of the users of each drug had made some purchases from a friend or dealer. If a man did not obtain the drug free on the occasion of first use, he began by buying it. Opiates are the only drugs for which ways other than these two account for an appreciable percentage for first use. Buying drugs was more common as the usual, rather than as the first, way of getting all of the drugs; the increase is accounted for by those who used the drugs more than experimentally. In general, a man began by obtaining a drug free, and if he did not continue use, this was his "usual" way; if he continued, he shifted to buying the drug.

Table 6.2. Routes of Administration of Drugs Ever Used, by Experimental[1] and Other Users of Each Drug (Percentages)

		Oral	Smoked	Sniffed	Needle: Mainline	Needle: Other	Other
Marihuana							
Experimental	(423)	6	98	5	0	0	0
Other	(959)	39	100	15	*	0	*
Psychedelics							
Experimental	(291)	94	6	13	1	1	0
Other	(259)	99	15	39	9	1	1
Stimulants							
Experimental	(207)[1]	96	1	10	*	1	0
Other	(374)	97	3	26	13	2	*
Sedatives							
Experimental	(177)[1]	99	0	2	1	1	0
Other	(232)	100	5	11	16	2	*
Heroin							
Experimental	(72)	11	21	56	35	8	0
Other	(76)	11	21	66	78	18	3
Opiates							
Experimental	(300)[1]	54	57	8	2	2	*
Other	(193)	71	54	11	11	2	0
Cocaine							
Experimental	(214)	10	6	89	7	1	0
Other	(138)	13	11	93	37	4	1

[1]"Experimental" means use less than 10 times for drugs other than stimulants, sedatives and opiates. For the latter drugs, quasi-medical users, almost all of whom had used less than 10 times, are excluded. By definition, all of their use was oral.

The respondents obtained the drug from their own prescriptions in a fair number of cases of use of the opiates, sedatives and, to a lesser extent, the stimulants. For some this was the first way, and for almost equal numbers it was also the usual way. It may seem surprising to find cases of "from your own prescription" for the other drugs, particularly heroin, marihuana and cocaine. There are only one or two cases of this kind for these drugs. These may be coding or punching errors, which it has not been possible to check as yet, but some of these responses could represent accurate answers regarding use in other countries where heroin and cocaine may be prescribed.

In a few cases forged prescriptions or thefts from others were the source of drugs. Another response, growing or making one's supply, was given with some frequency only for marihuana, but it was the usual source of marihuana for only one percent of the users. Other ways of obtaining the drugs appear for opiates, sedatives and stimulants, but it has not been possible to examine the individual interview schedules to determine what these ways were; in any event the frequency of these other ways is negligible.

In Table 6.2 the ways in which users ingested the various drugs are shown. The quasi-medical users of stimulants, sedatives and opiates are excluded; by definition all of their use was oral. The data are presented separately for the experimental users (use less than 10 times) and other users, because there are some marked differences between them. In particular, those who used a drug 10 times or more have taken it in more ways. All of the ways that men ever used the drugs are included; consequently, the percentages total to more than 100 percent, but it is noticeable that for the experimenters the sums are only slightly more than 100 percent, while for other users the sums are higher.

Different routes of administration are associated with the various drugs. Almost everyone who used marihuana smoked it, almost all users of psychedelics, stimulants and sedatives took them orally, and almost all users of cocaine sniffed the drug. For these drugs and these routes the figures for experimenters and other users are almost identical. On the other hand, sniffing and mainlining were almost equally reported for heroin; for other opiates the percentages were similar for oral use and smoking. For heroin and opiates there are differences between the experimenters and the other users in mainlining and oral use, respectively.

For marihuana and the sedatives the most frequently reported modes of use, smoking and oral, respectively, have no close second. However, for all of the other drugs one finds at least 10 percent of the users reporting some other mode of use, and heroin was used by each mode of administration by 10 percent or more of the users.

All of the drugs were taken orally, although the percentages were low for marihuana, heroin and cocaine. Smoking was the usual mode for marihuana (98 percent); 21 percent of the heroin users have smoked it, and more than half of the users of other opiates have smoked them; some of this is accounted for by the 208 users of opiated hashish. Sniffing was a frequent mode for heroin, cocaine and, to a lesser extent, psychedelics and stimulants.

Perhaps the most surprising finding is that all of the drugs have been taken by needle, and this involved mainlining more than intramuscular or subcutaneous injection. For all drugs, the percentages of experimental users who used a needle are considerably smaller than for other users, and only for heroin did an appreciable proportion of the experimenters inject the drug.

In an analysis not presented in tabular form, the first and usual routes of administering the drugs were examined. For marihuana smoking was the first and usual route; this was the case for 98 percent of the experimenters and 99 percent of the other users. For psychedelics, stimulants and sedatives the oral route was the first and usual one for 90 percent or more of the experimenters and other users. For heroin, the percentages for first and usual route were almost identical for experimenters. However, for those who used heroin 10 or more times, the first and usual routes differed. Sniffing was the first route for 41 percent, but it was the usual mode for only 26 percent; similarly, 42 percent mainlined the first time they used heroin, but 64 percent usually did so. Only 14 percent began by smoking heroin, and 9 percent indicated that this was the usual mode. In short, if a man continued use of heroin, he tended toward intravenous injection.

In Table 6.2 there are differences between heroin and the other opiates. Sniffing and mainlining were the major routes of administration of heroin even for experimenters, and they were by far the most frequently reported routes for other users. In contrast, these were relatively unimportant modes for users of other opiates, who reported oral administration and smoking. In the analysis of the first and usual routes of opiate use,

these differences were again observed; almost equal percentages began and continued with oral use or smoking, and there was no hint of a shift toward mainlining with continued use, as was the case with heroin.

It would be easy to assume, because of their identical pharmacological effects, that use of heroin and of the other opiates were essentially similar, and that the choice of the drug depended on accidental factors such as availability. However, the sizable difference in the way the drugs were used suggests that the meaning, purpose and context of use may have been different.

Finally, cocaine tended to be used by sniffing both at first and usually, although there is a slight trend toward mainlining among other than experimental users. Of the experimental users, 4 percent began with mainlining, and it was the usual route for 5 percent; 12 percent of the other users began by mainlining, and it was the usual route for 20 percent.

Reasons for Use and Nonuse of Drugs

Two series of questions were included in the interview, one for nonusers and those who used a drug less than 10 times, and another for all users. The first set contained eight possible reasons for not using a drug, and the question was, "Why did you never use these drugs, or use them less than 10 times? Was that at least in part because . . . ? How about (Drug)?" The second set contained nine possible reasons for use, and the question was: "We're interested in the reasons people have for using these drugs. At any time have the following been fairly important reasons for your using them? How about . . . ?" In both series, each reason was asked about each drug to which it applied; that is, the first set was asked about each drug not used, or used less than 10 times, and the second set about each drug ever used, regardless of the extent of use.

The percentages of men who reported reasons for not using or using less than 10 times are shown separately in Table 6.3; it seems reasonable to treat the latter as reasons for discontinuing use. A glance at the table shows that multiple reasons were given, although more for not using than using less than 10 times. Only in the third set of rows, relating to the availability of drugs, did users report the reason more often than nonusers, and then only for heroin, opiates and cocaine.

The pattern of reasons is similar across drugs, and for both those who never used the drug and those who tried it only a few times. Possible bad effects on health as well as dislike or an expectation of undesirable effects were the two most common reasons for all drugs. Effects on health were the most commonly noted reason. The single exception was marihuana; effects on health ranked third for those who had used it. This might be a learning effect, either from personal experience with the drug or exposure to the values of more regular users, or both.

At the other extreme, lack of availability or cost of the drug was the least frequently reported reason for avoiding use, for all drugs except heroin and cocaine. Religious or moral reasons for not using drugs were mentioned by only about 40 percent of the nonusers. The percentages for alcohol and marihuana were higher, but they were based on small parts of the sample; for the majority of the sample, who used these two drugs, such reasons were inoperative or ineffective.

Fear of becoming dependent on the drug was mentioned relatively often as a reason for avoiding sedatives, heroin, opiates, stimulants and cocaine. Fear of losing control over oneself may tap essentially the same thing, since its ranking in frequency of mention is usually close to fear of becoming dependent, and it is chosen over the latter as a major reason for avoiding psychedelics. Fear of trouble with the police was mentioned by more than half of those who never used the drugs and by less than half of those who did.

Despite these differences, there is a considerable degree of regularity exhibited in the data. While there is considerable variation across reasons for each drug, there is less variation across drugs for each reason, especially for the experimenters. This fact suggests that the reasons given for not using drugs reflect general normative tendencies and attitudes toward drugs in general, rather than drug-specific rationales.

The more frequently stated reasons for not using drugs were practical and expedient ones--effect on health, did not like it, might cause trouble with the police--rather than expressions of moral convictions (religious or moral reasons), or commitment to conformity (family or friends would not approve). This could mean only that young men are more comfortable with practical than moral explanations of their behavior.

The reasons given for use by users of each drug are shown in Table 6.4. The numbers of experimental users are the same as the numbers of those who used less than 10 times in the previous table, except for stimulants,

Table 6.3. Reasons for Not Using Drugs, or Using Them Less Than Ten Times (Percentages)

	No Use / Used Less Than 10 Times	Alcohol (76) (93)	Marihuana (1128) (423)	Psychedelics (1960) (291)	Stimulants (1821) (293)	Sedatives (2002) (263)	Heroin (2362) (72)	Opiates (1731) (499)	Cocaine (2158) (214)
Because family or friends would not approve?	No use	55	53	47	45	44	46	46	45
	Used less than 10 times	43	35	20	23	19	19	27	17
Because you might become dependent on it?	No use	50	51	54	55	54	64	59	58
	Used less than 10 times	34	33	29	42	38	58	45	39
Because you couldn't get it, or it cost too much?	No use	13	10	12	12	12	17	15	16
	Used less than 10 times	6	9	9	9	8	26	17	40
Because it might have a bad effect on your health?	No use	83	75	83	81	80	85	83	82
	Used less than 10 times	58	58	75	73	64	69	66	62
Because it might get you in trouble with the police?	No use	55	66	65	62	61	64	65	64
	Used less than 10 times	34	64	38	43	29	40	41	38
Because of religious or moral reasons?	No use	71	52	45	46	43	43	44	44
	Used less than 10 times	45	29	21	21	20	19	26	18
Because you might lose control over yourself?	No use	54	55	65	57	55	64	62	62
	Used less than 10 times	40	37	59	38	33	44	39	27
Because you did not like it or its effects, or thought you would not like it?	No use	87	70	76	74	74	76	76	75
	Used less than 10 times	64	68	68	59	61	61	56	42

Table 6.4. Reasons for Drug Use, for Experimenters and Other Users of Each Drug (Percentages)

		Alcohol	Marihuana	Psychedelics	Stimulants	Sedatives	Heroin	Opiates	Cocaine
Experimental Users* (n)		(93)	(423)	(291)	(207)	(177)	(72)	(300)	(214)
Other Users* (n)		(2341)	(959)	(259)	(374)	(232)	(76)	(193)	(138)
To help you get to sleep or relax?	Experimental users	10	8	3	5	50	13	27	10
	Other users	37	47	4	4	68	50	51	12
To help you forget your worries or troubles?	Experimental users	8	7	9	9	24	14	16	11
	Other users	36	32	19	18	50	54	36	28
Because it was expected of you in the situation?	Experimental users	40	43	23	19	18	18	21	21
	Other users	49	40	23	19	21	29	23	19
To help you stay awake, or alert?	Experimental users	1	1	7	75	2	0	4	13
	Other users	2	6	24	90	3	11	4	34
To get high, or stoned?	Experimental users	12	53	82	48	72	75	75	87
	Other users	65	93	97	73	72	99	79	97
From force of habit, or because you were used to using it?	Experimental users	0	1	3	2	3	4	4	4
	Other users	28	26	13	21	21	55	17	15
To heighten your senses - like taste, touch, or hearing?	Experimental users	0	11	39	31	4	8	12	35
	Other users	6	46	56	42	8	22	22	47
Because you were bored, and it helped pass the time?	Experimental users	17	14	23	18	24	21	26	26
	Other users	48	56	41	33	36	46	40	42
To enable you to get through the work day?	Experimental users	0	1	2	39	3	3	5	5
	Other users	5	14	5	59	9	33	14	17

*Quasi-medical users are excluded, for stimulants, sedatives and opiates.

sedatives and opiates; the quasi-medical users of these drugs have been excluded. The vast majority of the quasi-medical users had used these drugs less than 10 times.

Multiple reasons could be given for each drug, and they tended to be given for all except experimental use of alcohol. With a few exceptions all reasons were endorsed more often by those who used the drug more than experimentally; continued use may produce additional reasons for use. Indeed, for heroin and cocaine any reason seems to have served those who used the drug 10 times or more, and this is almost as true for several of the other drugs. Thus, for marihuana, stimulants and opiates, eight of the nine reasons were endorsed by at least 10 percent of those who were more than experimental users. The suggested generalization of motives for use may account, in part, for some unexpected findings, such as the facts that a few men said they used sedatives to stay awake or alert and that heightening the senses was a goal in use of all drugs. When these responses were first noted, it was suspected that they might represent coding or punching errors or inaccurate replies by respondents. These possibilities still need to be examined, but it appears from the patterns of responses that a plausible alternative is that some regular users came to see the drugs as serving any purpose an interviewer mentioned.

There is more variation in the reasons for use than in the reasons for not using a drug; this is true both for the apparent importance of reasons for using different drugs and in the difference between experimental and other users. One exception to this variation is use in order to get high, which was the most important reason given by both experimental and other users for use of all drugs except alcohol and stimulants. With respect to alcohol, it was not the primary reason for use by the experimenters, who more frequently said they used alcohol because it was expected of them, and the primary purpose of stimulant use was to help stay awake or alert. This use of stimulants, incidentally, as well as the high ranking of getting to sleep or relaxing as a reason for use of sedatives and opiates, suggests that a fair amount of use was for instrumental, rather than recreational purposes.

Use "from force of habit" ranked low for the experimental users of all drugs, but this was also true for other users, except in the case of heroin, for which it was the second most frequently cited reason for use. "To get through the work day" also ranked low for most drugs; the sole exception was the stimulants, and again this suggests instrumental use.

The other six reasons ranked high for some drugs and low for others. "To sleep or relax" ranked high for sedatives and opiates, in the high to middle range for alcohol, marihuana and heroin, but low for all other drugs. "To forget worries or troubles" ranked as high as third for regular users of heroin and sedatives, as low as eighth for regular users of stimulants, and fluctuated between these extremes for all users of other drugs.

Among experimental users, the perception that use was expected in the situation ranked first for alcohol, second for marihuana and no lower than fifth for any drug. This is clearly important in the explanation of the onset of drug use, not only because so many men gave this reason for use, but also because it was a major reason for use of alcohol and marihuana, the drugs with which most users begin.

"To stay awake or alert" showed the widest variation; it ranked first in frequency of mention for the stimulants and fourth for cocaine, but low for most drugs. "To get high or stoned" has already been mentioned as the primary reason for use of all drugs, but it is worth emphasizing that it was a reason for use for almost 100 percent of those who used psychedelics, heroin and cocaine more than experimentally; this was also the case for 93 percent of such users of marihuana and for at least 65 percent of such users of all other drugs.

"To heighten the senses" ranked second in mention for psychedelics and cocaine, fourth for marihuana and stimulants and sixth to eighth for all other drugs for both categories of users. Use due to boredom ranked about as high as "because it was expected in the situation"; both are exceeded only by "to get high."

For five of the drugs, the experimental users in Table 6.4 are the same men as those shown as using less than 10 times in Table 6.3. For stimulants, sedatives and opiates the difference is accounted for by the quasi-medical users, who are not included in Table 6.4. If they were included in this table, the probable effect would be to make "to get to sleep or relax" the highest, rather than second highest percentage for sedatives and opiates, and for stimulants it might make getting through the work day rank second rather than third in the number of times it was mentioned. The tables can, therefore, be treated together, and give the reasons why

the experimenters tried the drugs and why they did not continue.

For all of the drugs except alcohol, "to get high" was the most common or second most common reason cited for use by experimental users. Use because it was expected in the situation was the most common reason why experimenters used alcohol; this also ranked high for marihuana, and it was mentioned by about one-fifth of those who experimented with other drugs. The other reasons were mentioned by only a few men, or for only a few drugs; for example, to stay awake and to get through the work day were mentioned for stimulants, to sleep or relax was noted for sedatives, and to heighten senses was a reason for use of psychedelics, stimulants and cocaine.

These, then, were the reasons why some men tried the drugs. The reasons given by the same men for discontinuing use were fear of effects on their health and dislike of the drug or its effects. These are only superficially satisfying explanations why they did not continue to use the drugs. The question becomes: Why did they dislike the drugs or have these fears when other men liked them sufficiently and handled their fears well enough to continue?

One possible explanation has been advanced by Becker (1953) with respect to marihuana, and there is no reason why it could not be generalized to other drugs. That is, one learns to like the drug and to deal with the reasons against its use in the process of using the drug; the teachers are the users with whom one associates. In this study data were obtained about friends who were using the drug when the respondent started to use it. This extension of Becker's explanation would be supported if it were found that the experimenters reported fewer such friends than those who continued to use a drug.

Therefore, the experimenters were compared with those who had used the drugs more extensively, and the findings--in terms of the percentages who reported they had only a few friends or no friends using the drug when they began its use--are presented with the figures for experimenters first and others second. The percentages were: marihuana, 45 and 25; psychedelics, 53 and 46; stimulants, 51 and 41; sedatives, 56 and 49; heroin, 81 and 51; opiates, 68 and 54; and cocaine, 70 and 56.

Some of these percentage differences are not large, but the difference for heroin is 30 and for marihuana 20 percentage points. Even more important, all of the differences are in the same direction. This is clear support for Becker's hypothesis; there is reason to suspect that if more detailed data were available--for example, the respondents' emotional attachment to these friends or how much time was spent with them--the support would be even stronger.

Another question in the interview concerned use of drugs by current friends. The responses indicated that the experimental users had even less contact with drug-using friends when interviewed than when they first tried the drugs. In contrast, the data on other users suggest approximately the same degree of contact with drug-using friends at initial use and at the time of the interview. Even more revealing are the facts that emerge when these more than experimental users are divided into former and current users. Like the experimenters, the former users reported less current contact with drug-using friends than when they began use; current users, on the other hand, reported more contact with drug-using friends at the time of the interview.

In short, those who began use but stopped after a few times had fewer friends who used the drug when they began, and this number decreased from first use to the time of the interview. Those who continued use had more friends using when they began and generally maintained or increased contact with such friends. The men need not, however, be seen as passive objects, whose drug use was determined by the contacts they happened to have. Undoubtedly their friendship pattern reflects choices of associates on their part, and the effect of associates only partially explains continuation of drug use.

Nevertheless, it appears to be a highly plausible partial explanation; when men first tried the various drugs many of them had qualms, misgivings and fears about them. When they were supported by friends, many were able to handle these obstacles. Others, who did not have the same degree of support (and who may well have differed in other ways), discontinued use and are classified as experimental users or former users.

The reasons reported in Table 6.4 reflect the variety of nonmedical uses of the drugs covered in this study. As was argued in Chapter 2, some of the use of stimulants, sedatives and opiates appears to have been quasi-medical. Some of it, especially of the stimulants and sedatives, appears to have been instrumental and quite possibly functional in that the drugs were used to facilitate work or rest. Some of the drug use seems to reflect dependence, as well as an effort to cope with life, and some was to expand

Table 6.5. Expectations for Future Use of Each Drug (Percentages)

A. Total Sample (2510)	CHANCE OF USE THREE YEARS AFTER INTERVIEW: No Chance	Slight Chance	Good Chance	Very Good Chance
Tobacco	34	19	21	26
Alcohol	10	17	33	41
Marihuana	61	17	11	10
Psychedelics	91	6	1	1
Stimulants	84	11	3	1
Sedatives	86	11	2	1
Heroin	97	2	*	*
Opiates	86	11	2	1
Cocaine	90	7	2	1

B. Expectations of at Least "A Slight Chance" of Future Use by Experience With Each Drug[1]

	Never Used (n)	Never Used Percent	Former Users (n)	Former Users Percent	1974-75 Users (n)	1974-75 Users Percent
Tobacco	(766)	30	(248)	25	(1494)	92
Alcohol	(76)	7	(130)	29	(2301)	97
Marihuana	(1128)	4	(421)	22	(960)	87
Psychedelics	(1960)	2	(362)	15	(186)	67
Stimulants	(1821)	4	(390)	26	(295)	73
Sedatives	(2002)	4	(282)	29	(224)	73
Heroin	(2362)	1	(100)	12	(46)	50
Opiates	(1731)	1	(518)	30	(255)	61
Cocaine	(2158)	2	(173)	34	(178)	74

*Less than half of one percent.

[1]Sums of n's in each row fall short of 2510 by from 1 to 6 cases, due to unknowns.

consciousness. In any event it is clear that the most common reasons for use fall under the general rubric of recreational use or use for the effect of the drug itself.

Expectations for Future Use

For some years, in studies of cigarette smoking an inquiry about the respondents' estimation of the probability that they will be cigarette smokers in the future has been included. In general, respondents seem to underestimate the probability of future use when their expressed estimates are compared with use as reported in later surveys. In this study, the following question was asked for each drug: "What would you say the chances are that you will be using each drug, even occasionally, three years from now?" The four response categories were those shown in Panel A of Table 6.5.

The sum of the percentages who chose an answer other than "no chance" is close to the percentage of current users of each drug, but tends to be slightly lower for most drugs.

The percentages who estimated there was at least a slight chance of future use are shown in Panel B of Table 6.5 in terms of experience with each drug. Most of the current users thought there was at least some chance they would continue use. Among former users, fairly sizable minorities--averaging about 25 percent--thought they might resume use. Even among those who have never used the drugs, there are a few who thought they might begin to use the drugs in the future.

Marihuana may be used as an example. If one accepted the percentages in Panel B as estimates of future use, the number of users three years in the future would be slightly larger than the number of current users. This would also be true for the other drugs, including heroin and cocaine. There is no basis to accept as accurate the respondents' estimates of future use, but certainly there is nothing to suggest that a decrease in use is likely.

Drug Use Among Current Friends

Respondents were asked: "As far as you know, how many of your current friends and acquaintances use each drug?" Five answer categories were used, as displayed in Table 6.6. In Panel B the responses are presented in terms of the respondents' experience with the drugs.

With the exception of the opiates, nearly all of the current users reported at least a few friends using the drug. The percentages among the former users were lower than among the current users, and the difference was substantial for heroin. Even among the nonusers the proportion who had friends who used the drugs was far from negligible. Indeed, the percentage was surprisingly high for heroin. While only 2 percent of the sample reported current use of heroin, 12 percent of the nonusers said that they knew at least a few current users of heroin.

One possible explanation is that the nonusers of drugs incorrectly suspected use in friends or acquaintances or had reason to believe that they were using some drug and interpreted this as use of several drugs. Another explanation is that nonusers may have had good reason to suspect past use of a drug by a friend and assumed that the use was current.

The latter explanation is plausible because of the answers to two questions: the nonusers were asked whether they had ever been present when the drug was being used and whether the drug had ever been offered to them. In the first case the respondent would know from his own observation that his friends were using, and he would have their own statements as to what it was they were using. In the second case (probably but not necessarily the same occasion), it would be a fair inference that the person who offered the drug was using it.

In answer to the first question, 63 percent of the nonusers of marihuana had been present when marihuana was being used. The comparable percentages for the other drugs were: psychedelics, 30; stimulants, 38; sedatives, 35; heroin, 17; opiates, 16; and cocaine, 21. Almost identical percentages responded positively to the second question.

The respondents, therefore, had a good basis for the statements about use by current friends if they were thinking in terms of known use at some time, but not necessarily the present. The intent of the question was to ascertain current use by current friends, but the word current was attached to "friends" and not to "use." For nonusers, then, it appears that the question may have elicited answers about how many current friends had ever used drugs, rather than the intended answer in terms of current use.

If this happened with nonusers, it could have happened with former users and current users. With respect to these two groups, however, there is less reason to question their statements that most of them had friends who were using the drugs. Here the relevance of the figures lies in the generally accepted belief

Table 6.6. Drug Use Among Current Friends of Respondents (Percentages)

A. Total Sample (2510)	PROPORTION OF CURRENT FRIENDS USING				
	All or Most	About Half	Less Than Half	A Few	None
Tobacco	43	35	9	11	2
Alcohol	67	20	4	7	2
Marihuana	19	18	11	30	23
Psychedelics	1	4	9	29	57
Stimulants	3	5	8	32	52
Sedatives	2	4	7	31	55
Heroin	*	1	2	11	86
Opiates	1	2	3	18	76
Cocaine	2	3	3	18	74

B. At Least "A Few" Friends Are Current Users by Experience With Each Drug[1]

	Never Used		Former Users		1974-75 Users	
	(n)	Percent	(n)	Percent	(n)	Percent
Tobacco	(766)	98	(248)	96	(1494)	100
Alcohol	(76)	84	(130)	89	(2301)	99
Marihuana	(1128)	56	(421)	84	(960)	98
Psychedelics	(1960)	32	(362)	77	(186)	94
Stimulants	(1821)	36	(390)	72	(295)	93
Sedatives	(2002)	36	(282)	69	(224)	88
Heroin	(2362)	12	(100)	41	(46)	87
Opiates	(1731)	12	(518)	43	(255)	67
Cocaine	(2158)	17	(173)	63	(178)	87

*Less than half of one percent.

[1]Sums of n's in each row fall short of 2510 by from 1 to 6 cases, due to unknowns.

that the continuation of drug use, as well as its onset, is facilitated and made more probable by having friends who use drugs. It may be presumed that if one has such friends, this will work against cessation among current users and toward the resumption of use among former users; this is one more reason to doubt that any sizable reduction in the number of users will occur in the immediate future.

Availability of Drugs

The respondents were asked: "Suppose you had the money and wanted to get each of these drugs now. How hard do you think it would be for you to get some within a day?" The three response categories are shown in Panel A in Table 6.7. Half or more thought it would be possible to get each drug within a day, and one-fifth or more would find it easy. The lowest percentage was for heroin, but 17 percent of the sample said it would be easy to obtain heroin.

In Panel B the responses of "easy" and "difficult but possible" are combined. At least two-thirds of the current and former users reported it would be possible, albeit perhaps difficult, to obtain any of the drugs. It is significant that only for heroin, opiates and cocaine would most nonusers find it almost impossible to obtain the drug, and the percentages are so close to 50 that one can say that half or more of the sample

Table 6.7. Availability of Drugs (Percentages)

A. Total Sample (2510)	Easy	Difficult But Possible	Almost Impossible
Marihuana	70	19	10
Psychedelics	32	38	29
Stimulants	41	35	24
Sedatives	40	34	25
Heroin	17	28	53
Opiates	22	31	46
Cocaine	20	33	46

B. "Easy" or "Possible" by Experience With Each Drug[1]

	Nonusers		Former Users		1974-75 Users	
	(n)	Percent	(n)	Percent	(n)	Percent
Marihuana	(1128)	82	(421)	94	(960)	97
Psychedelics	(1960)	66	(362)	83	(186)	90
Stimulants	(1821)	70	(390)	91	(295)	93
Sedatives	(2002)	71	(282)	85	(224)	92
Heroin	(2362)	45	(100)	69	(46)	83
Opiates	(1731)	46	(518)	64	(255)	80
Cocaine	(2158)	49	(173)	68	(178)	87

[1]Sums of n's in each row fall short of 2510 by from 1 to 6 cases, due to unknowns.

Table 6.8. Attitudes and Opinions About Selected Drugs by Use of Those Drugs (Percentages Responding "True")

	A. BY USE OF ALCOHOL for Alcohol			B. BY USE OF MARIHUANA for Marihuana			C. BY USE OF HEROIN for Heroin		
(n)[1]	Never Used (76)	Former Users (130)	1974-75 Users (2301)	Never Used (1128)	Former Users (421)	1974-75 Users (960)	Never Used (2362)	Former Users (100)	1974-75 Users (46)
People are more likely to be violent or agressive while high on it.	88	89	87	46	19	10	52	29	17
It makes people lose their will to work.	80	82	66	71	62	47	86	90	91
People are likely to hurt themselves or take foolish risks while high on it.	92	95	89	89	74	38	90	73	65
A lot of the people who use it are not very different from me.	62	62	83	58	72	85	34	41	61
Using it makes people want to try other drugs.	53	42	17	71	48	28	74	42	35
Laws concerning its use should be made less strict or abolished.	13	15	36	28	53	83	14	23	35
It's all right to use it whenever you feel like it.	20	28	52	14	33	62	7	13	39

[1]Sums of n's for each drug fall short of 2510 by 1 to 3 cases, due to unknowns.

felt they could obtain any drug within a day. Lack of availability of a drug must be a minor reason for abstaining from its use; indeed, only 10 to 17 percent of the nonusers gave this as a reason when they were asked the question directly. (Table 6.3)

Attitudes and Opinions

In one of the two self-administered questionnaires completed during the interview, the respondents were asked to check true or false for each of the seven statements shown in Table 6.8; this was done separately for alcohol, marihuana and heroin. The answers are presented for each drug according to the respondent's experience with that drug.

The first three items refer to presumbly problematic effects of the drugs. There was general agreement, regardless of use, that alcohol was likely to produce such effects. Only for loss of will to work did current users of alcohol differ from former users and nonusers to an appreciable extent, and even among current users the majority endorsed the statement. With respect to marihuana, the pattern of responses was quite different; nonusers were more likely to endorse the statements than former users and much more likely to do so than current users.

For heroin, this pattern also appeared for two of the three items but was reversed for loss of will to work. The users of heroin were somewhat more likely to endorse this statement than nonusers. With respect to these three specific problems, alcohol was clearly seen as most likely to produce two of them, heroin as most likely to produce loss of will to work, and marihuana was seen as least likely to have any of these effects.

The differences in terms of experience with the three drugs were marked for the other four opinions or attitudes. Current users were more likely to perceive users as similar to themselves, to believe that laws controlling use should be less strict, and to agree that it is all right to use the drug whenever one feels like it. They were least likely to agree that use of the drug makes people want to try other drugs.

If one compares the drugs in terms of these items, marihuana users were perceived as least different, and heroin users as most different from the respondent, even within categories of experience with the drug. Heroin and marihuana were perceived as more likely to make people want to try other drugs than was alcohol. The statement about making the laws less strict has a clear meaning for marihuana and heroin, as specific proposals of decriminalization have been widely publicized; its meaning for alcohol is less clear. Yet, the pattern was the same for the three drugs; current users were most likely to endorse the statement. Only a third of the current users of alcohol and heroin endorsed it. It was only for marihuana that support for the statement was high, and even among the nonusers 28 percent endorsed it.

The respondents' endorsement of the statement is politically significant. The men who endorsed less punitive marihuana laws comprised slightly more than half of the entire sample.

Finally, the statement asserting that it is all right to use the drug whenever one feels like it showed the same pattern; it was least endorsed by nonusers and most frequently endorsed by users. Again, only a minority of the users of heroin endorsed it.

7 Problems and Benefits Attributed to Drug Abuse

This chapter is restricted to the problems and benefits the respondents perceived to be due to their use of the different drugs. Four types of questions on these topics were asked in the interview. First, each respondent was given a card on which the drugs he said he had used were circled, and the following question was asked:

> Now we're interested in any problems your drug use may have caused you. Did your use of any of the drugs circled on your list ever cause you:
>
> a) any health problems or injuries?
> b) to have problems at work?
> c) 1. to have problems with a wife or girlfriend,
> 2. your parents,
> 3. friends or other people you lived with?
> d) to have problems with the law?
> e) any problems besides those mentioned?

If the answer to any of these questions was positive, the respondent was asked to name the drug(s) that caused the problem. This was followed by a set of questions regarding each drug named; the respondent was asked in what year the drug first caused problems of the type under discussion, in what year it last caused problems and what was the most serious problem that it caused.

Because of the way these questions were phrased, it is not possible to infer that a respondent regarded as serious any problem he reported. He was asked to report any problems; only after he identified a problem in an area was he asked what was the most serious one of that type. Thus, a respondent could answer the first question in the affirmative with only minor problems in mind; in this case, his next answer cannot be taken to mean he perceived it as a serious problem. It is apparent that some of the respondents did, in fact, describe some relatively minor problems.

From the respondent's description it was sometimes possible to determine that he perceived the problem as a serious or a trivial one. The utility of this classification has not been assessed, but it is apparent that in many cases the data are insufficient for reliable coding, as, for example, when the complete description was, "I got drunk, fell, and my arm went through a window and was cut." For present purposes, the seriousness of the problems reported must be taken as an unknown, and the point of major interest is the denial of problems.

A second set of questions, again with reference to those drugs the man had used, dealt with other consequences directly attributable to drug use. For all of the drugs he had used, the man was asked if he ever:

> a) had any bad trips from using any of them?
> b) got into a physical fight as a result of using any of them?
> c) stayed up or high on any of them for more th[illegible] a day at a time?
> d) found that he couldn't remember what had happened to him as a result of using any of them?
> e) had been physically or psychologically dependent on any of them?

A third approach was qualitatively different and deliberately lacked specificity. After the "problem" questions, the interviewer continued:

> We have been talking only about problems. Did your use of any of the drugs circled

on your list help or benefit you in any way?

If the answer was positive, the interviewer probed for a complete list of drugs that were perceived as having benefited the man. Then, for each drug, the question was asked: "In what ways did (Drug) benefit you?"; these answers have not been analyzed as yet.

Finally, the respondent was asked: "How would you rate the effects your use of each drug has had on your life? How about for (Drug)?" The respondent was given a card containing the answers "very bad," "more bad than good," "more good than bad," and "very good." A fifth response, "no effect," was recorded by the interviewer only if the respondent volunteered it and refused to make a choice among the responses on the card.

PROBLEMS OF SPECIFIED TYPES

The data in Table 7.1 show the prevalence of certain types of problems by drug class for men in the age range of 20 to 30. With the total sample as a base, only 14 percent of the men reported one or more problems due to marihuana use. Alcohol was clearly the drug most productive of problems; 40 percent of the total sample reported one or more problems resulting from their use of it. In terms of the total sample, few of the men reported problems due to their use of drugs other than alcohol or marihuana.

An examination of the row for alcohol in Table 7.1 reveals that problems with the law and problems with parents were mentioned by 18 percent of the men in the sample, while 19 percent reported problems with a wife or girlfriend resulting from their use of alcohol. The percentages for marihuana were considerably lower; only 5 or 6 percent of the men reported these legal or interpersonal problems.

The percentages in Table 7.1 are based on the total number in the sample, and most of the men had not used most of the drugs; consequently, the drugs could not have caused problems for them. The percentages in Table 7.2 are based on the number of men who had used each drug. Of necessity, the percentages of men who reported no problems are lower than when the total sample was the base. However, only 20 percent of the users of psychedelics reported one or more problems associated with their use. The comparable percentages for stimulants, sedatives, opiates and cocaine were relatively low. Although not shown in tabular form, the percentages remained low even among those

Table 7.1. Problems of Specified Types and No Problems Reported: Percent of Total Sample (n = 2510)

	No Problems Reported	Problems of Specified Types					
		Health	Work	Law	Wife or Girlfriend	Parent(s)	Friend(s)
Alcohol	60	10	5	18	19	18	8
Marihuana	86	2	2	5	5	6	1
Psychedelics	96	1	1	1	2	1	1
Stimulants	95	2	1	1	2	1	1
Sedatives	96	1	1	1	2	1	1
Heroin	98	1	1	1	1	1	1
Opiates	98	*	*	*	1	1	*
Cocaine	98	*	0	*	*	1	*

*Less than half of one percent.

who used the drugs more than experimentally. In fact, only 32 percent of the men who had used stimulants more than on an experimental basis reported one or more problems, and the percentages were low for comparable users of sedatives, opiates and cocaine.

When those who had ever used heroin constituted the base, 64 percent denied all of the specified problems. When the experimental users were excluded, only 34 percent denied these problems. In fact, whether the base is those who have ever used or those who have used heroin more than experimentally, the percentages who reported health, work, law or one of the interpersonal problems (wife or girlfriend, parents, friends) were higher than for all the other drugs, except alcohol. When one considers problems resulting from extensive use, heroin produced proportionately more problems than alcohol or marihuana. Whereas the heroin users constitute a small segment of the population of young men, 97 percent of the men had used alcohol, and 63 percent of the alcohol users are classified in the heavy or heaviest categories. This means that in terms of the number of men who are affected alcohol is the more problematic drug for society.

CONSEQUENCES OF DRUG USE

The percentages in Table 7.3 refer to consequences the respondents attributed to their use of the drugs in response to specific questions. First, four of every ten men who had used psychedelics reported having bad trips. Second, those who had used alcohol were more likely to report fights as a consequence than were users of the other drugs. When only the heavy and heaviest users of alcohol were examined, some 38 percent reported fights resulting from their use of alcohol. Third, use of psychedelics and stimulants was clearly associated with staying high for more than a day, as this experience was reported by 27 and 40 percent, respectively, of the users. Fourth, 39 percent of those who had used alcohol found that on one or more occasions they could not remember what had happened to them as a result of their alcohol consumption; the comparable figure was 51 percent among the heavy and heaviest users of alcohol. Fifth, 29 percent of those who had ever used heroin reported having been physically or psychologically dependent on or addicted to the drug. For those who had used heroin 10 or more times, 54 percent reported dependence. For the other drugs the percentages of men who reported dependence were relatively low, even when use was more than experimental.

Table 7.2. Percent of Users[1] Who Reported Specified Types of Problems

			Problems of Specified Types					
	n	No Problems	Health	Work	Law	Wife or Girlfriend	Parent(s)	Friend(s)
Alcohol	(2434)	58	11	5	19	20	18	8
Marihuana	(1382)	74	3	3	9	9	12	3
Psychedelics	(550)	80	4	4	4	10	6	3
Stimulants	(581)	77	10	3	3	8	5	3
Sedatives	(409)	79	8	3	5	10	8	4
Heroin	(148)	64	12	10	14	22	17	16
Opiates	(493)	92	1	1	1	3	3	1
Cocaine	(352)	92	2	0	3	2	2	1

[1]For stimulants, sedatives, and opiates, quasi-medical use was defined as no use.

Table 7.3. Percent of Users[1] Reporting Bad Trips, Fights, Staying High More Than a Day, Memory Lapses, and Dependence Due to a Given Drug

	n	Bad Trips	Fights	High More Than a Day	Couldn't Remember	Dependence
Alcohol	(2434)	16	28	9	39	5
Marihuana	(1382)	8	2	8	8	5
Psychedelics	(550)	41	3	27	13	2
Stimulants	(581)	9	4	40	4	9
Sedatives	(409)	9	11	6	17	5
Heroin	(148)	18	5	15	9	29
Opiates	(493)	5	1	3	3	2
Cocaine	(352)	6	3	11	3	3

[1]For stimulants, sedatives, and opiates, quasi-medical use was excluded.

Table 7.4. Percent of Users[1] Who Perceived Benefits From Drug Use and Their Perception of the Overall Effect Drug Usage has had on Their Life

	n	Some Problems Reported	Some Benefits Reported	Overall Life Effect		
				Very Bad or Bad	None	Very Good or Good
Tobacco	(2211)	-	-	66	22	12
Alcohol	(2434)	42	22	46	21	33
Marihuana	(1382)	27	32	33	22	45
Psychedelics	(550)	21	26	54	12	35
Stimulants	(581)	23	36	48	13	39
Sedatives	(409)	20	15	58	11	31
Heroin	(148)	36	12	74	13	14
Opiates	(493)	5	11	51	17	33
Cocaine	(352)	8	11	43	18	39

[1]For stimulants, sedatives, and opiates, quasi-medical use was excluded.

BENEFITS PERCEIVED AND OVERALL LIFE EFFECTS OF DRUG USE

While it is widely assumed that the use of drugs can produce problems, the opposite assumption is seldom made, that use may produce benefits. The findings regarding perceived benefits in contrast with problems and the perceived overall life effects of use are shown in Table 7.4.

The first finding deserving mention is that for three drugs, alcohol, sedatives and heroin, higher percentages reported problems than perceived benefits. However, those who had used these drugs more extensively reported more benefits in comparison with all users; for problems and benefits, respectively, the figures are 27 and 22 percent for alcohol, 21 and 16 percent for sedatives and 22 and 11 percent for heroin. For the other six drugs higher percentages of the men perceived benefits than reported problems. Those who used marihuana, psychedelics and stimulants more than experimentally were somewhat more likely to report benefits from their use of these drugs.

With regard to the overall effects of drug use on one's life, 74 percent of the heroin users perceived the effects as bad or very bad. It is interesting that tobacco ranked second only to heroin in terms of the perception of negative effects. In contrast, only 33 percent of the users and 24 percent of the moderate and heavy users of marihuana described the overall effect of their use in such negative terms. Between these extremes the percentages reporting that the effect had been bad or very bad were: cocaine, 43; alcohol, 46; stimulants, 48; opiates, 51; psychedelics, 54; and sedatives, 58 percent.

Finally, an examination of the percentages who perceived use of a drug as having a good or very good overall effect on their life reveals that only for heroin and tobacco were the percentages low; 14 percent of the heroin users and 12 percent of the tobacco users rated the effects of these drugs positively. The percentages for all of the other drugs were, in fact, rather high. When these percentages are calculated for those whose use of these drugs had been more than experimental, they were higher than for experimental users. In fact, 66 percent of the moderate and heavy users of marihuana saw the overall life effect of their use as good or very good. The comparable percentages for more than experimental users of the other drugs were: alcohol, 38; psychedelics, 48; stimulants, 45; sedatives, 36; heroin, 20; opiates, 38; and cocaine, 49.

Marihuana differed from all of the other drugs in one respect; it was the only one for which more users reported the effect on their lives as good or very good than reported it as bad or very bad.

8 Drugs, Crime and Criminal Justice

Although the association between drug use and criminality is widely recognized, there is considerable disagreement concerning the nature of the relationship. Earlier studies, based largely on addicts hospitalized for treatment, revealed that the relationship between drug use and crime was neither a simple nor a unidirectional one (Voss and Stephens, 1973). A serious limitation of earlier analyses has been reliance on narcotic addicts for information (Voss and Stephens, 1973; see also Inciardi and Chambers, 1972; STASH Report No. 221, 1974). The point is not that narcotic addicts may provide unreliable or invalid information, but that their involvement in crime may differ from that of users of other drugs, or of narcotic users who are not addicted, if for no other reason than that addicts may have an expensive "habit" to maintain.

The men in the sample were asked if they had ever committed each of ten illegal acts and, if so, the first and last year they did so. In addition to these self-reports on criminal activity, information was obtained at other points in the interview concerning whether they had ever sold drugs, stolen drugs, purchased drugs from a friend or dealer and whether drug use had caused the respondent to have problems with the law. A series of questions pertaining to contacts with the criminal justice system were also posed. These included inquiries about arrests for traffic violations, driving while intoxicated and other offenses; age at first arrest; appearance in juvenile court; commitment to a juvenile correctional facility; conviction for a criminal offense; jail, workhouse or prison sentence; and the length of time served.

Self-Reported Criminal Acts

In Table 8.1 the number and percentage of respondents who reported each of ten criminal acts are shown in the first two columns. Seventy percent of the men reported public intoxication, and 60 percent admitted that they had driven an automobile while intoxicated The latter figure is noteworthy in view of the hazard a drunken driver creates for other travelers. Further, only 8 percent of the men reported an arrest for driving while intoxicated. The next most common of these ten offenses was shoplifting; 44 percent of the men reported this form of theft.

Also shown in Table 8.1 are the percentages of men who reported each act according to whether or not they had used marihuana or other drugs, excluding tobacco, alcohol and marihuana. Included in the category of "other drugs" are psychedelics, stimulants, sedatives, heroin, other opiates and cocaine. There are sizable differences between the users and nonusers of marihuana and also between users and nonusers of the other drugs. For example, 3 percent of the nonusers reported that they had stolen an automobile, while 8 percent of the marihuana users and 11 percent of those who had used other drugs admitted to auto theft.

With the exception of the first two acts, for which consumption of alcohol to the point of intoxication is a necessary condition, users of marihuana were, in general, at least two to three times more likely to have committed each of these acts. Except for shoplifting, similar or greater differences appear between users and nonusers of other drugs.

In Table 8.2 the information on self-reported criminal acts is shown in relation to the

Table 8.1. Self-Reported Criminal Acts by Use of Marihuana and Other Drugs (Percentages)

Criminal Act	Number Admitting Act	Percentage of Sample	Marihuana		Other Drugs (Marihuana Excluded)	
			Never Used	Used	Never Used	Used
(n)	(2510)		(1128)	(1382)	(1665)	(845)
1. Public intoxication.	1754	70	54	83	62	86
2. Driving while intoxicated.	1512	60	45	73	53	75
3. Auto theft.	145	6	3	8	3	11
4. Breaking and entering.	314	13	6	18	7	24
5. Armed robbery.	36	1	*	2	1	3
6. Shoplifting.	1103	44	29	56	35	62
7. Stealing (face-to-face).	83	3	1	5	2	7
8. Illegal gambling.	74	3	1	4	2	4
9. Bad checks.	70	3	1	4	1	6
10. Forged prescriptions.	37	1	*	2	*	4

Table 8.2. Self-Reported Criminal Acts by Extent of Marihuana Use (Percentages)

Criminal Act	Total	EXTENT OF MARIHUANA USE				
		No Use	Experimental	Light	Medium	Heavy
(n)	(2510)	(1128)	(423)	(231)	(227)	(501)
1. Public intoxication.	70	54	78	86	84	87
2. Driving while intoxicated.	60	45	69	77	72	75
3. Auto theft.	6	3	4	6	9	12
4. Breaking and entering.	13	6	10	10	20	27
5. Armed robbery.	1	*	1	2	2	4
6. Shoplifting.	44	29	50	52	56	64
7. Stealing (face-to-face).	3	1	3	3	3	9
8. Illegal gambling.	3	1	4	2	5	6
9. Bad checks.	3	1	2	3	4	7
10. Forged prescriptions.	1	*	*	*	4	4

*Less than half of one percent.

Table 8.3. Self-Reported Criminal Acts by Extent of Alcohol Use (Percentages)

Criminal Act	(n)	Total (2510)	EXTENT OF ALCOHOL USE					
			No Use (76)	Experimental (93)	Light (491)	Medium (318)	Heavy (599)	Heaviest (933)
1. Public intoxication.	1754	70	0	1[illegible]	39	67	82	90
2. Driving while intoxicated.	1512	60	0	12	25	53	71	84
3. Auto theft.	145	6	0	0	4	4	5	9
4. Breaking and entering.	314	13	5	6	6	10	13	18
5. Armed robbery.	36	1	0	0	1	1	1	2
6. Shoplifting.	1103	44	16	31	31	34	47	56
7. Stealing (face-to-face).	83	3	0	4	2	2	3	5
8. Illegal gambling.	74	3	0	3	2	2	2	5
9. Bad checks.	70	3	0	1	2	2	2	5
10. Forged prescriptions.	37	1	0	0	1	1	1	2

measure of extent of marihuana use. Whereas the data in Table 8.1 show that commission of these criminal acts is related to the use of marihuana, it is apparent in Table 8.2 that involvement in each of these acts is also related to the extent of marihuana use. For example, 8 percent of the users reported an auto theft, but among heavy users of marihuana the percentage was 12. Similarly, 9 percent of the heavy users had committed a robbery in comparison with 5 percent of all users and 1 percent of the nonusers. In fact, for each criminal act the percentage for heavy users (Table 8.2) was higher than the comparable figure for all users (Table 8.1).

Examination of the relationship between alcohol use and the ten self-reported criminal acts revealed a similar pattern; the heavy and heaviest users of alcohol were more likely to report each of the acts than were men who were light or moderate drinkers (Table 8.3). Among the 76 nonusers four (5 percent) admitted to breaking and entering, and 12 (16 percent) reported shoplifting; they did not report any of the other criminal acts. The extent of drinking was directly related to public drunkenness and drunken driving. Relatively few of the light drinkers reported these acts, whereas among the heaviest users of alcohol, 90 and 84 percent, respectively, reported drunkenness in public and driving while intoxicated. For the other self-reported criminal acts the relationships, although similar, were weaker than the ones observed for marihuana use. For example, 9 percent of the heaviest drinkers reported an auto theft in comparison with 12 percent of the heavy marihuana users.

Each of the self-reported criminal acts was classified on the basis of the first and last year the respondent indicated it occurred. Some 60 to 70 percent of those who reported an auto theft, breaking and entering or shoplifting indicated that it occurred only while the respondent was under 18 years of age (Table 8.4). On the other hand, two-thirds of those who admitted to public drunkenness and armed robbery said it took place for the first time after the age of 18, and approximately three-fourths of those who reported driving while intoxicated, running numbers and check forgery initially committed the offense after attaining the age of 18. Nearly all of the prescription violations occurred after the respondents were 18. The two alcohol-related offenses--public drunkenness and driving while intoxicated--were not only the most commonly reported offenses

Table 8.4. Self-Reported Criminal Acts by Age (Percentages)

Act Reported as Occurring:	Before 18	After 18	Before and After 18
1. Public intoxication.	4	66	30
2. Driving while intoxicated.	2	73	25
3. Auto theft.	67	25	8
4. Breaking and entering.	60	28	13
5. Armed robbery.	11	66	23
6. Shoplifting.	71	10	19
7. Stealing (face-to-face).	42	36	22
8. Illegal gambling.	15	74	11
9. Bad checks.	22	75	3
10. Forged prescriptions.	3	92	5

but were also most likely to be reported as occurring both before and after the age of 18.

The median age at which the men in four age groups (20-21, 22-24, 25-27, 28-30) indicated they had first committed the ten self-reported criminal acts was examined. For some of the offenses, median ages of 21, 22 and 23 were found in the two older age groups, and this suggested that it was inappropriate to base comparisons of the age groups on all of the self-reported acts, as the men in the youngest age group were only 20 or 21 years old. In other words, their period of exposure to the risk of criminality was considerably less than was the case for the older men. Therefore, the median age was calculated only for those acts reported through the age of 20, as shown in Table 8.5. These medians are remarkably similar across the four age categories. With two exceptions, the fluctuations between adjacent categories are only one year; more importantly, there is no apparent trend for any offense. Thus, for the alcohol-related offenses 18 is the median age, regardless of year of birth, if one excludes acts that take place after the age of 20. Because the medians are so similar across the age groups, it is appropriate to note that, overall, for five of the ten acts the median is 18. The exceptions are: shoplifting, 12; robbery, 15; auto theft, 16; breaking and entering, 16; and prescription forgery, 19.

The percentage who admitted each of the self-reported offenses was also examined within the age categories. When all of the reported offenses were considered, there was little difference for armed robbery and robbery, but for the two alcohol-related offenses, lower percentages of the younger men reported these acts. The older men were more likely to report that they had run numbers or had a job involving illegal gambling. The younger men were somewhat more likely to report the other offenses.

To equalize the period of risk, the percentages were again calculated only for the acts reported through the age of 20 (Table 8.6). For the two alcohol-related offenses the percentages increased from the oldest to the youngest age groups; when all of the acts were examined, the trend was in the opposite direction. By the age of 20 higher proportions of the younger than of the older respondents reported public drunkenness and driving while intoxicated. For both of these offenses there was a difference of 19 percentage points between the oldest and youngest men. With one exception, the percentage differences were smaller for the other acts, but the percentages were consistently higher for the youngest men. Armed robbery was exceptional in that 1 percent of the men in each age category reported commission of that offense by the age of 20. While the earlier analysis of median ages revealed no salient differences among the age groups, the younger men were more likely to report that they had committed each of the acts, other than armed robbery, by the time they were 20 years of age (Table 8.6).

The percentages for the two older age groups in Table 8.6 were quite similar, as were the figures for the two youngest age groups. Therefore, the data for the oldest groups (ages 25-30) were combined to predict the incidence of the ten self-reported criminal acts that would have been observed among the younger men (ages 20-24) if they had been involved in these acts to the same extent as the older respondents. As in the previous analysis, only the acts reported through the age of 20 were used.

In Table 8.7 the actual and predicted numbers of the self-reported acts are shown and, for the younger men, the ratio of the actual to the predicted number in which the base is 100. In other words, if the actual and predicted numbers were the same, the ratio would be 100. For the first seven acts the actual number reported by the younger men was 20 to 40 percent higher than the number predicted on the basis of the older respondents' reported criminality. For the eighth and ninth acts, running numbers and check forgery, the actual number was double that expected, and for prescription forgery it was almost five times greater.

Comparable figures for use of cigarettes, alcohol, marihuana and other drugs are also shown in Table 8.7. The number of cigarette smokers among the younger men was smaller than expected, while the number of users of alcohol was almost exactly what one would predict on the basis of the older men's behavior. However, for marihuana and other drugs, there have been dramatic increases. There were twice as many young users of the other drugs and almost three times as many young marihuana users as one would expect on the basis of the experience of the older men. These percentage increases are not the result of a difference in the number of younger and older men as this difference was controlled in making the calculations presented in Table 8.7.

However, it is a fact that the younger groups are numerically larger. Taken in conjunction with that fact, these data suggest that there has been a "real" increase in drug use and in crime. In other words, the increase reported

Table 8.5. Median Age for Initial Occurrence of Self-Reported Criminal Acts Admitted Through the Age of 20

Criminal Act	(n)	Total (2510)	YEAR OF BIRTH Before 1947 (541)	1947-49 (692)	1950-52 (740)	After 1952 (537)
1. Public intoxication.	1393	18	18	18	18	17
2. Driving while intoxicated.	1074	18	18	18	18	18
3. Auto theft.	134	16	15	16	17	16
4. Breaking and entering.	292	16	14	16	16	16
5. Armed robbery.	25	18	17*	18*	16*	15*
6. Shoplifting.	1059	12	12	12	13	13
7. Stealing (face-to-face).	61	15	16	15	15	16
8. Illegal gambling.	42	18	1[illegible]*	17*	18	18
9. Bad checks.	42	18	17*	18*	19	18
10. Forged prescriptions.	16	19	--*	18*	19*	19*

*Based on less than ten cases.

Table 8.6. Initial Occurrence of Self-Reported Criminal Acts Through Age 20 by Age Groups (Percentages)

Criminal Act	(n)	Total (2510)	YEAR OF BIRTH Before 1947 (541)	1947-49 (692)	1950-52 (740)	After 1952 (537)
1. Public intoxication.	1393	55	47	51	58	66
2. Driving while intoxicated.	1074	43	36	36	45	55
3. Auto theft.	134	5	5	4	6	7
4. Breaking and entering.	292	12	10	10	12	15
5. Armed robbery.	25	1	1	1	1	1
6. Shoplifting.	1059	42	36	40	46	46
7. Stealing (face-to-face).	61	2	2	2	3	3
8. Illegal gambling.	42	2	1	1	2	2
9. Bad checks.	42	2	1	1	2	3
10. Forged prescriptions.	16	1	0	*	1	1

*Less than half of one percent.

in recent years on the basis of official crime statistics is not solely a product of improved records systems. While the younger men did not appear to differ from their older counterparts in terms of when they became involved in criminal acts, there were more young men due to the "baby boom" in the early 1950s, and a higher proportion of them were involved in criminal acts, insofar as one can judge from the available data. On the other hand, the limitations of these data with reference to the nation's crime rate must be recognized. Specifically, information on only ten offenses is available, and the frequency with which the respondents committed these acts was not ascertained. Nor was the occurrence of other common forms of crime such as assault, homicide and forcible rape assessed. Further, other types of crime such as occupational, corporate and organized crime were ignored.

It has been shown that use of marihuana and other drugs and certain kinds of criminal activity were more prevalent among the younger men, but a caveat is in order. It is essential to note that while the data presented thus far show a statistical association between criminal activity and drug use, no effort has been made to establish a causal relationship. Preliminary efforts to unravel the causal linkage, if any, between crime and drugs will be deferred until after the respondents' contacts with the criminal justice system have been described.

Table 8.7. Actual and Predicted Incidence of Criminal Acts and Drug Use by Age 20, and Ratio of Actual to Predicted Number

Self-Reported Act**	YEAR OF BIRTH 1944-49 n = 1233		1950-54 n = 1277			Ratio of Actual to Predicted Number
	Percentage	Actual Number	Percentage	Actual Number	Predicted Number	
1	49	609	61	784	631	124
2	36	444	49	630	460	137
3	5	58	6	76	60	127
4	10	120	14	172	124	139
5	1	11	1	14	11	127
6	38	474	46	585	492	119
7	2	25	3	36	26	138
8	1	14	2	28	14	200
9	1	14	2	28	14	200
10	*	2	1	14	3	467
Cigarettes	67	828	63	805	858	94
Alcohol	93	1144	95	1212	1186	102
Marihuana	20	250	56	713	259	275
Other Drug Use	22	267	44	568	277	205

*Less than half of one percent.

**See Table 8.6 for self-reported criminal act.

Contacts With the Criminal Justice System

Tabulations, which are not presented, show that 66 percent of the men indicated that they had been given a ticket or arrested for a traffic violation; parking tickets were excluded by the phrasing of the question. The likelihood of receiving a citation for a traffic violation is undoubtedly related to the manner in which one drives, but it is also related to how much one drives and how long one has driven. In the sample 55 percent of the men in the three youngest age cohorts reported traffic arrests, while 71 percent of the respondents in the three oldest cohorts had been arrested for traffic violations. There was also a sizable difference in terms of ethnicity; 69 percent of the whites and 59 percent of the men classified as Other reported traffic citations in contrast with only 46 percent of the black respondents.

Overall, 8 percent of the men indicated that they had been arrested for drunken driving, but again there was a relation with age. Ten percent of the men in the three oldest cohorts reported such arrests in comparison with 5 percent of the youngest men. By the time the younger men reach their late 20s presumably more of them will have been arrested for driving while intoxicated. There are also sizable ethnic differences for this offense; arrests were reported by 8 percent of the whites, 5 percent of the blacks, and 18 percent of those classified as Other. In terms of the level of education completed by the respondent there were few differences in traffic arrests, but for arrests for driving while intoxicated, there was a strong inverse relationship with the respondents' education. The percentages who reported such arrests by educational level were: less than high school, 16 percent; high school graduate, 9 percent; some college, 6 percent; and college graduate, 2 percent.

Table 8.8. Number of Respondents by Extent of Marihuana Use and Age Groups, Ethnicity, and Education

		MARIHUANA USE				
	Total (2510)	No Use (1128)	Experimental (423)	Light (231)	Medium (227)	Heavy (501)
AGE GROUP						
Year of Birth						
1944-46	541	328	97	52	23	41
1947-49	692	320	125	74	54	119
1950-52	740	267	119	62	99	193
1953-54	537	213	82	43	51	148
ETHNICITY						
White	2103	970	357	193	178	405
Black	303	107	49	29	38	80
Other	104	51	17	9	11	16
RESPONDENTS' EDUCATION						
Less Than High School	394	189	63	26	37	79
High School Graduate	933	428	158	82	87	178
Some College	713	281	115	76	60	181
College Graduate	470	230	87	47	43	63

The likelihood of arrest for driving while intoxicated is related to car ownership; 5 percent of the men who owned cars reported such arrests in comparison with 3 percent of those who did not own cars. Car ownership is also related to age and ethnicity. The percentages of car owners by age were: 20-21, 82 percent; 22-24, 91 percent; 25-27, 95 percent; and 28-30. 96 percent. Similarly, 95 percent of the whites, 90 percent of those classified as Other and 73 percent of the blacks owned cars. Part of the explanation for the differences in arrests for driving while intoxicated involves access to an automobile.

When the respondents are classified in terms of the measure of extent of marihuana use and by age groups, ethnicity and level of education, there are relatively few men in some of the cells, as may be seen in Table 8.8. For example, there are only 26 men who did not complete high school who are classified as light users of marihuana. The numbers in Table 8.8 serve as the bases for the percentages in Tables 8.9 through 8.12.

Overall, 31 percent of the respondents indicated that they had been arrested for an offense involving something other than a traffic violation. As may be seen in Table 8.9, there were only minimal differences among the age groups while members of minority groups were more likely to report arrests for criminal offenses. In contrast with age, arrest is strongly associated with the amount of education a man has completed--three times as many men who did not complete high school were arrested than was the case for college graduates. Although not shown in tabular

Table 8.9. Nontraffic Arrests by Extent of Marihuana Use and Age Groups, Ethnicity, and Education (Percentages)*

			MARAHUANA USE				
	(n)	Total (2510)	No Use (1128)	Experimental (423)	Light (231)	Medium (227)	Heavy (501)
AGE GROUP							
Year of Birth:							
1944-46	541	29	21	31	39	57	61
1947-49	692	29	18	30	31	48	47
1950-52	740	34	15	29	34	49	53
1953-54	537	33	15	26	26	43	62
ETHNICITY							
White	2103	30	17	30	32	45	54
Black	303	39	24	29	38	58	56
Other	104	35	22	18	33	73	69
RESPONDENTS' EDUCATION							
Less Than High School	394	53	36	51	65	65	86
High School Graduate	933	32	16	30	38	53	58
Some College	713	28	15	26	26	42	45
College Graduate	470	17	10	16	15	35	35

*For numbers in each cell see Table 8.8.

form, a slightly higher percentage of the men who grew up in cities of 100,000 or more were arrested than those who resided in smaller places. Further, arrest is strongly related to marihuana use (Table 8.9). There are some fluctuations and minor reversals, but there is, nevertheless, a definite trend from the nonusers to the heavy users in the percentages of men who were ever arrested. Within each age group, ethnic category and educational level many more heavy users than nonusers reported an arrest for a criminal offense.

Eight percent of the men appeared in juvenile court. A larger proportion of the youngest men were referred to juvenile court, but the differences among the age groups were not as great as the differences in terms of extent of marihuana use (Table 8.10). The percentages of blacks and whites who appeared in juvenile court were almost identical, and again extent of marihuana use was associated with such an experience.

The differences according to the respondents' education are dramatic. Few of the men who eventually graduated from college appeared in juvenile court, regardless of the extent to which they used marihuana. For those who dropped out of high school and used marihuana, at least one-fifth appeared in juvenile court, as did two-fifths of the dropouts who were heavy marihuana users. Because it has not as yet been determined how many of these men used marihuana as juveniles, one cannot, on the basis of these data, infer that appearance in juvenile court was a result of marihuana use.

Table 8.10. Juvenile Court Appearance by Extent of Marihuana Use and Age Groups, Ethnicity, and Education (Percentages)*

			MARAHUANA USE				
	(n)	Total (2510)	No Use (1128)	Experimental (423)	Light (23)	Medium (227)	Heavy (501)
AGE GROUP							
Year of Birth:							
1944-46	541	6	4	7	10	9	15
1947-49	692	8	4	9	11	11	12
1950-52	740	8	4	7	6	9	16
1953-54	537	11	4	9	9	20	20
ETHNICITY							
White	2103	8	4	8	8	12	16
Black	303	9	3	8	14	11	16
Other	104	13	10	12	11	18	19
RESPONDENTS' EDUCATION							
Less Than High School	394	22	12	22	23	27	43
High School Graduate	933	8	4	7	12	11	13
Some College	713	5	2	5	4	8	11
College Graduate	470	2	**	2	4	5	3

*For numbers in each cell see Table 8.8.

**Less than half of one percent.

There is also a relation between the size of the city in which the respondents lived most of the time as juveniles and appearance in juvenile court; 13 percent of the men who lived in cities of 500,000 or more went to juvenile court in comparison with 6 percent of the residents of rural areas.

Only 2 percent of the respondents were sent to a juvenile correctional facility, and detailed analysis of these men is not warranted. It may be noted that commitment was directly related to city size. Two percent of the whites, 4 percent of the blacks and 7 percent of the Others were committed. In terms of the respondent's level of education, 9 percent of those who did not complete high school had experience in a juvenile facility. In contrast, 2 percent of the high school graduates, 1 percent of those who attended college, and none of the college graduates served time in an institution for juveniles.

Twelve percent of the men indicated that they had been convicted of a crime (Table 8.11). The age groups did not differ in terms of convictions even though the period of risk was greater for the older respondents, but there were differences between whites (11 percent) and blacks (17 percent) and Others (19 percent). The extent of marihuana use was related to convictions--at least one-fifth of the heavy users, regardless of age or ethnic background, were convicted of a criminal offense. Again, the respondent's education was a variable that had an independent effect on convictions; 27 percent of the high school dropouts and only 4 percent of the college graduates were convicted. Regardless of marihuana use, those who graduated from high school, the men who eventually attended college and particularly

Table 8.11. Crime Conviction by Extent of Marihuana Use and Age Groups, Ethnicity, and Education (Percentages)*

	(n)	Total (2510)	MARIHUANA USE: No Use (1128)	Experimental (423)	Light (231)	Medium (227)	Heavy (501)
AGE GROUP							
Year of Birth:							
1944-46	541	13	7	14	20	35	32
1947-49	692	11	6	9	12	20	25
1950-52	740	12	5	11	13	15	20
1953-54	537	13	6	9	9	22	22
ETHNICITY							
White	2103	11	5	11	12	15	22
Black	303	17	9	12	21	29	24
Other	104	19	12	0	22	64	31
RESPONDENTS' EDUCATION							
Less Than High School	394	27	16	24	35	41	47
High School Graduate	933	11	4	11	16	18	24
Some College	713	10	5	8	9	20	16
College Graduate	470	4	3	5	4	5	10

*For numbers in each cell see Table 8.8.

those who graduated from college appeared to be insulated from conviction in comparison with the high school dropouts. In terms of city size there was a relationship with conviction; the percentage convicted ranged from 10 percent among the rural residents to 15 percent for the men who grew up in cities of one million or more.

Again, the men in the four age groups did not differ in whether or not they served a prison sentence (Table 8.12). Blacks and Others were more likely than whites to serve a prison sentence. Only 4 percent of the whites served time, whereas 14 percent of the blacks and 13 percent of the Others served a prison sentence. Further, marihuana use interacts with race, and among the minority-group members who were moderate or heavy marihuana users, at least one-fifth served a prison sentence. In terms of the respondent's education, it was apparent that few of the men who attended college or graduated from college served prison terms; in fact, only two men who served a prison term graduated from college--one did not use marihuana, and the other man appears in the column for light marihuana users. There is also a linear relationship with city size; 4 percent of the rural residents and 11 percent of those who as juveniles resided in cities of one million or more served prison sentences.

In the preceding description of the respondents' contacts with the criminal justice system, ranging from nontraffic arrests to juvenile court appearances, juvenile correctional commitments, crime convictions and serving

Table 8.12. Sentence Served by Extent of Marihuana Use and Age Groups, Ethnicity, and Education (Percentages)*

			MARIHUANA USE				
	(n)	Total (2510)	No Use (1128)	Experimental (423)	Light (231)	Medium (227)	Heavy (501)
AGE GROUP							
Year of Birth:							
1944-46	541	6	3	6	8	17	17
1947-49	692	6	3	4	7	15	11
1950-52	740	4	2	3	3	5	8
1953-54	537	6	3	2	2	10	13
ETHNICITY							
White	2103	4	2	3	3	4	9
Black	307	14	7	8	17	24	20
Other	104	13	4	0	11	55	25
RESPONDENTS' EDUCATION							
Less Than High School	394	18	11	10	23	32	34
High School Graduate	933	5	1	5	5	7	12
Some College	713	2	1	2	1	7	4
College Graduate	470	**	**	0	2	0	0

*For numbers in each cell see Table 8.8.

**Less than half of one percent.

prison sentences, the temporal order of these events and use of alcohol, marihuana and other drugs has been ignored. On the basis of these data, one cannot infer either that drug use leads to contacts with the criminal justice system or that involvement with law-enforcement agencies increases the likelihood of drug use.

As noted in Table 8.1, there is a statistical association between involvement in the ten self-reported criminal acts and use of marihuana and other drugs. To establish a causal relationship it is necessary to show not only that there is a statistical association, but also that the presumed cause occurred before its effect, and that the relationship is not spurious (Hirschi and Selvin, 1973). There are at least three conflicting hypotheses as well as some support for each of them in the drug literature: (1) drug use leads to crime; (2) involvement in crime leads to drug use; and (3) both crime and drug use are the results of some other factor(s). Little attention has been directed toward the third hypothesis.

It may be recalled that the median age of first use of marihuana and other drugs was lower among the younger cohorts, and the incidence of drug use was higher among these younger men. The median age for the self-reported criminal acts reported by the age of 20 has remained almost constant, but there has been an increased incidence of these acts among the younger cohorts. Consequently, it is important to examine the variable of age in considering the possibility of a causal relation between drug use and criminal behavior, regardless of the causal direction that is postulated.

Three acts--shoplifting, auto theft and prescription forgery--were selected because they differed in the median age at which the respondents indicated they first committed them. To reiterate, the medians for these offenses are: shoplifting, 12; auto theft, 16; and prescription forgery, 19. For these offenses separate analyses were conducted for four age groups (20-21, 22-24, 25-27, 28-30). For each of these offenses, similar patterns were observed within the age categories in the temporal order of the criminal act and use of marihuana. Consequently, differences among the cohorts may be ignored in subsequent analyses of the temporal order of criminal acts and drug use.

While age, defined in terms of cohort differences, may be ignored, this does not mean that age is not an important variable. In the initial analyses of the relation between the year in which marihuana was first used and the initial occurrence of the ten self-reported criminal acts, there was no apparent pattern--marihuana use was both preceded and followed by the criminal acts. The respondents were then divided according to whether they used marihuana by the age of 16 or at an older age, and a definite pattern emerged. Among the men who admitted public drunkenness, driving while intoxicated, auto theft, breaking and entering or robbery as well as use of marihuana one pattern was evident. Most of the men who used marihuana by the age of 16 reported that they committed the criminal act for the first time in a year later than the one in which they first used marihuana; in contrast, for the men who first used marihuana at the age of 17 or at an older age, most of them had committed the criminal act before they used marihuana. For example, of those reporting both marihuana use and auto theft, 78 percent of the men who used marihuana by the age of 16 stole a car in a year subsequent to the one in which they used the drug, but of those who used marihuana at the age of 17 or later, 89 percent had already stolen a car. Thus, for five of the ten self-reported criminal acts, the temporal ordering of marihuana use and the criminal act appears to be a function of the age at which marihuana is first used.

For armed robbery, running numbers and check forgery, the same pattern was found for the men who used marihuana by the age of 16; however, for those who began use at a later age, 50 to 70 percent reported that they first committed the criminal act in the same year or in a year subsequent to the one in which they initially used marihuana. For these three offenses, then, there is some evidence that use of marihuana precedes the criminal act; however, relatively few men (1 to 3 percent) admitted these criminal acts.

Among those who admitted shoplifting and use of marihuana, 66 percent of those who used marihuana by the age of 16 had shoplifted in an earlier year, and 21 percent stated that they had shoplifted for the first time in a year subsequent to their initial use of marihuana. Among those who had first used marihuana when they were 17 or older, 92 percent had already shoplifted. Because the median age for shoplifting was 12, this offense usually preceded marihuana use, regardless of the age at which marihuana use first occurred.

Prescription forgery is a drug-related offense, but only 37 of the men reported it. Of these, one did not give complete time data, and 5 did not use marihuana. Of the remaining 31, 27 (87 percent) used marihuana

before they first forged a prescription, one man forged a prescription before using marihuana and 3 men reported both events as occurring in the same year. For this offense, the data support the marihuana-crime sequence, although it must again be emphasized that this is a relatively rare offense.

With the exceptions of shoplifting, prescription violation and, in part, three of the other offenses, among the men who used marihuana early and reported a criminal offense, marihuana use generally preceded the first occurrence of the criminal act--evidence that drug use precedes crime. However, for those who first used marihuana at a later age, most of the other offenses had already occurred for the first time--evidence that criminal activity precedes the use of marihuana. As the direction of the relation is contingent on the age of first marihuana use, there is almost equal support for both possible temporal orderings.

This preliminary examination of the data suggests that neither the hypothesis that drug use leads to criminal activity nor the one that criminal behavior leads to drug use is unambiguously supported. While additional analysis is required, it is also essential to test whether a presumably causal relationship is spurious. To this end three test variables that were temporally prior to the first occurrance of either marihuana use or involvement in criminal activity were introduced. The test variables were size of city of residence to age 18, mother's education and father's education.

In this analysis the two alcohol-related offenses were combined, and shoplifting was distinguished from the other self-reported criminal acts. The test variables were then used as controls in the relationships between marihuana use and (1) the alcohol-related offenses, (2) shoplifting and (3) the other self-reported acts. Because none of the partial relations were substantially lower than the original relations, this analysis did not provide any evidence that the original relations were spurious. To a limited extent, the relations are conditional on city size, father's education and mother's education. The linkage between the alcohol-related offenses and marihuana use is somewhat lower for the men who resided in cities of 500,000 or more, whereas for the other self-reported offenses, excluding shoplifting, the relation with marihuana use is stronger among the men who lived in such large cities as juveniles.

While further analysis is required to assess the causal relation, if any, between drug use and criminal activity, the answers to one question shed some light on the extent of legal difficulties the men experienced as a result of their use of drugs. Each respondent was given a card on which the drugs he said he had used were circled, and the following question was asked: "Except for tobacco, did your use of any of the drugs circled on your list cause you to have problems with the law?" In subsequent analyses the responses in terms of the first year drugs caused problems with the law will be used in conjunction with the dating of contacts with the criminal justice system. As a preliminary step in this direction, the data in Table 8.13 show the responses to this question in relation to criminal justice contacts. Obviously, some of these contacts were not drug related, but it is apparent that at each step there is a relationship. Of the 204 men who said they had been arrested for driving while intoxicated, 81 percent said they had had legal problems due to their use of drugs. If the respondents' usage of the term drugs included alcohol, presumably this figure would be 100 percent, and the discrepancy undoubtedly reflects the fact that some Americans do not view alcohol as a drug.

Among those who were arrested, slightly more than one-half saw drugs as having caused them legal difficulties. For those who appeared in juvenile court, served time in a juvenile correctional facility, were convicted of a crime or served a prison term, at least two-thirds attributed some of their legal difficulties to drugs. Among those who did not have such contacts with the criminal justice system, positive responses were considerably less common, and the percentage differences were consistently around 45 to 50 points. Nine percent of the men who were never arrested indicated that they had had legal difficulties due to drugs.

Although not shown in tabular form, it may be noted that 580 of the respondents indicated that they had had legal difficulties as a consequence of their drug use. Of these men, 75 percent had been arrested, and 36 percent had been convicted of a crime. The comparable percentages for those who did not report legal difficulties due to drug use were 18 and 5 percent, respectively, for arrest and conviction. Obviously, these low percentages were, in part, due to the fact that some of these men did not use drugs or used them only to a limited extent.

Also shown in Table 8.13 are the self-reported criminal acts and three drug offenses in relation to contacts with the criminal justice system. As in the previous analysis, the two alcohol-related offenses are combined, and

Table 8.13. Law Problems Due to Drugs, Self-Reported Criminal Acts, and Drug Offenses by Contacts With the Criminal Justice System (Percentages)

	Driving While Intoxicated Arrest		Arrested		Juvenile Court Appearance		Juvenile Commitment		Crime Conviction		Prison Sentence	
	Yes (204)	No (2306)	Yes (786)	No (1724)	Yes (205)	No (2305)	Yes (59)	No (2451)	Yes (303)	No (2207)	Yes (135)	No (2375)
LAW PROBLEMS												
Law Problems Due to Drugs	81	18	55	9	64	19	71	22	69	17	70	20
SELF-REPORTS												
Public Intoxication or Driving While Intoxicated	99	73	87	69	87	74	88	74	89	73	84	74
Shoplifting Before Age 18	46	38	53	33	65	37	73	38	55	37	54	38
Other Self-Reported Criminal Acts Admitted												
None	66	81	60	89	38	84	22	81	47	85	33	83
One	22	13	23	9	29	12	24	14	26	12	26	13
Two or More	12	6	17	2	33	4	54	5	27	3	41	4
DRUG OFFENSES												
Bought Drugs	59	40	61	33	63	39	71	41	64	38	68	40
Stole Drugs	4	3	6	1	8	2	8	3	9	2	13	2
Sold Drugs	27	19	36	12	43	18	56	19	42	17	47	18

juvenile shoplifting is distinguished from the other self-reported criminal acts. As might be expected, nearly all of the men who reported an arrest for driving while intoxicated indicated that they had either been drunk in public or had driven an automobile while intoxicated. While the percentages of men within each type of criminal justice contact who admit to one of the alcohol offenses are consistently higher than for those who did not have a similar contact, the largest difference involves the percentages arrested for driving while intoxicated. For the other types of contacts, there are differences of 10 to 18 percentage points. The pattern is similar for juvenile shoplifting although the percentage differences are somewhat larger--those who report each level or point of contact with the criminal justice system are more likely to admit that they had shoplifted as juveniles.

The men who appeared in juvenile court, were committed to a juvenile correctional institution, convicted of a crime or served a prison sentence were considerably more likely to report one or more of the other criminal acts than those without such experiences. For example, 78 percent of the men sent to a juvenile institution reported one or more of these acts in comparison with 19 percent of those with no commitment as juveniles. The comparable figures for those who did and did not serve a prison sentence are 67 and 17, respectively.

For the three drug offenses, those who reported any criminal justice contact were more likely to indicate they had bought, stolen or sold drugs. However, the acts of buying and selling drugs were not confined to men who have been arrested or incarcerated--one-third of those with no arrest and two-fifths of the men with no further official contact had bought drugs. Relatively few men had stolen drugs, but the ones who reported such thefts were more likely to indicate each type of contact with the criminal justice system. Again, the reader is cautioned that these data cannot be interpreted to mean that drug use caused or led to these contacts with the criminal justice system.

In summary, the data in this chapter show that there is a strong statistical association between the extent of drug use, whether measured in terms of use of alcohol or marihuana, and self-reported criminal acts. Further, there is an equally strong association between the extent of marihuana use and contacts with the criminal justice system. Problems with the law due to drugs, the self-reported criminal acts, and buying, selling and stealing drugs were reported more frequently by the men who had each type of contact with the criminal justice system.

The associations among these variables are complicated by their relations with other variables, notably education, age, ethnicity and the size of the city in which the respondents resided as juveniles. The associations with age are particularly important in considering the possibility of a causal relation between drug use and criminal behavior.

The preliminary analyses described in this chapter do not provide clear support either for the idea that drug use leads to crime or that criminal activity leads to drug use. With the exception of prescription forgery and shoplifting, there appears to be no consistent temporal relationship between drug use and criminal activity on which an argument for a causal link can be developed. Rather, the temporal order of marihuana use and a number of the self-reported criminal acts appears to be a function of the age at which marihuana is first used. For several of these offenses, among the men who admitted them as well as use of marihuana, those who used marihuana by the age of 16 reported that they committed the criminal act for the first time in a year later than the one in which they first used marihuana; in contrast, among the men who used marihuana at the age of 17 or older, most of them had committed the criminal act before they used marihuana. While only preliminary analyses have been conducted, the fact that drug use sometimes occurs first and at other times criminal behavior precedes use indicates that if there is a causal connection between drug use and criminal behavior, it is not a simple one.

9 Multiple Drug Use

In this chapter attention is focused on multiple drug use or the reported use of at least two of the drug classes examined in this study. This is an initial report, and the question whether use of one drug leads to or "causes" use of another drug is not addressed, but the data can be used to establish the temporal order of usage.

USE OF PAIRS OF DRUGS

One tactic used by previous researchers to study multiple drug use is to examine all of the possible combinations of drug classes, note how many cases are observed for each combination and determine if some combinations are observed more frequently than would be expected by chance. As an example, one possible pattern is that none of the nine drug classes were used. It should be noted that in this and later analyses in this chapter, quasi-medical use of stimulants, sedatives and opiates was treated as no use of the drugs. In addition, there are nine different patterns in which one, and only one, drug class was used. If one adds the patterns in which two, three or more of the nine classes were used, the total number of possible patterns is 512. Only 86 of the 512 patterns actually emerged. This clearly established that it is not a matter of chance which drugs are found together in the drug histories of the men in the sample.

Some 78 percent of the respondents were included in the ten pure scale types of multiple drug use that are shown in Table 9.1. By far the most prevalent pattern, including 33 percent of the respondents, involved use of only alcohol and tobacco. Another numerically prominent pattern involved use of tobacco, alcohol and marihuana; 22 percent of the sample fitted this pattern. Only 2 percent of the men reported no use of any drug, while 4 percent reported use of drugs in all nine categories.

A second tactic that has been used to study multiple drug involvement is to examine the percentage of persons who report use or nonuse of one drug in terms of reported use of another drug. However, before a detailed analysis of the data in Table 9.2 is presented, it is appropriate to offer a general interpretation. An examination of the pairs of columns for each drug, in which users of the drug are compared with nonusers, confirms that use of any drug is associated with use of all other drugs. This can be illustrated by examining the data for users and nonusers of tobacco and alcohol. Most tobacco users have used alcohol but so have most nonusers; so this finding means little. Some 59 percent of the tobacco users report having used marihuana, in comparison with 27 percent of those who have never used tobacco. This finding is interesting from two perspectives. First, use of tobacco is correlated with marihuana use. Second, approximately one-fourth of those who have never used tobacco report having used marihuana, and almost all of them smoked marihuana. Thus, use of tobacco is not a necessary precursor of marihuana use.

Two points should be mentioned about the users and nonusers of alcohol. Since practically all of the respondents have used alcohol, the percentages for nonusers are based on a small number and are perhaps unstable. It is also evident that use of alcohol is associated with use of the other drugs: 57 percent of alcohol users have also used marihuana, 23 percent psychedelics, 24 percent stimulants, 17 percent sedatives, 6 percent heroin, 20 percent opiates and 14 percent cocaine, while nonusers of alcohol rarely used any other drug, except tobacco.

Table 9.1. Number and Percent in Each of Ten Pure Scale Type Patterns of Ever-Never Use[1]

Number in Each "Pure" Category	Percent in Each "Pure" Category	Drug Classes and Percent Who Have Ever Used								
		97%	88%	55%	23%	22%	20%	16%	14%	6%
45	2	No use								
170	7	Alcohol								
824	33	Alcohol	Tobacco							
551	22	Alcohol	Tobacco	Marihuana						
84	3	Alcohol	Tobacco	Marihuana	Stimulants					
37	1	Alcohol	Tobacco	Marihuana	Stimulants	Psychedelics				
20	1	Alcohol	Tobacco	Marihuana	Stimulants	Psychedelics	Opiates			
33	1	Alcohol	Tobacco	Marihuana	Stimulants	Psychedelics	Opiates	Sedatives		
92	4	Alcohol	Tobacco	Marihuana	Stimulants	Psychedelics	Opiates	Sedatives	Cocaine	
99	4	Alcohol	Tobacco	Marihuana	Stimulants	Psychedelics	Opiates	Sedatives	Cocaine	Heroin
Total 1955	78									

[1]For stimulants, sedatives, and opiates, quasi-medical use was defined as no use.

Table 9.2. Percent of Users and Nonusers of Each Drug Who Have Used the Other Drugs[1]

	Tobacco		Alcohol		Marihuana		Psychedelics		Stimulants		Sedatives		Heroin		Opiates		Cocaine	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
n	2211	299	2434	76	1382	1128	550	1960	581	1929	409	2101	148	2362	493	2017	352	2158
Tobacco	--	--	90	41	94	81	95	86	96	86	95	87	99	87	96	86	96	87
Alcohol	99	85	--	--	100	94	100	96	100	96	100	96	100	97	100	96	100	96
Marihuana	59	27	57	4	--	--	100	43	97	42	97	47	99	52	91	46	100	48
Psychedelics	24	9	23	0	40	*	--	--	71	7	80	11	92	18	72	10	89	11
Stimulants	25	7	24	0	41	1	75	--	--	--	82	12	86	19	71	21	86	13
Sedatives	18	6	17	1	29	1	60	4	58	4	--	--	80	12	60	6	72	7
Heroin	7	*	6	0	11	*	25	1	22	1	29	1	--	--	27	1	38	1
Opiates	21	7	20	0	33	4	65	7	60	7	73	9	91	15	--	--	79	10
Cocaine	15	5	14	0	25	*	57	2	52	3	62	5	90	9	56	4	--	--

[1]For stimulants, sedatives, and opiates, quasi-medical use was defined as no use.

*Less than half of one percent.

Further discussion of the data in Table 9.2 will focus on marihuana, heroin and cocaine. An important inference is that marihuana may be a key drug in understanding multiple drug use. Evidence for this can be found in two places in Table 9.2. The first is in the column indicating the percentages of users and nonusers of marihuana who reported using the other drugs. The second location is in the third row where the percentages of users and nonusers of the other drugs who had also used marihuana are shown; these percentages are markedly different. Some 40 percent of those who had used marihuana had used psychedelics, while virtually none of the nonusers reported psychedelic use. The comparable figures for stimulants were 41 and 1 percent; for sedatives, 29 and 1 percent; for heroin, 11 percent and less than 1 percent; for opiates, 33 and 4 percent. Finally, 25 percent of the marihuana users reported having used cocaine in comparison with almost none of those who have not used marihuana. In three comparisons between users and nonusers of marihuana, fewer than 1 percent of the nonusers had ever used psychedelics, heroin or cocaine. If it can be shown that use of marihuana predates use of the other drugs, a plausible hypothesis would be that use of marihuana, along with a number of other factors, facilitates in some way the movement of a person into use of other substances.

An examination of the figures in row 3 of Table 9.2 also suggests this conclusion, though from a slightly different perspective. Of those who had ever used psychedelics or cocaine 100 percent had also used marihuana; this was also true for 97 percent of those who had used stimulants or sedatives, 91 percent who had used opiates, and 99 percent of those who had used heroin. Among the nonusers of these drugs, the percentages reporting use of marihuana ranged from 42 to 52 percent.

There are several reasons for suggesting marihuana rather than alcohol as a key to the understanding of multiple drug use. All users of marihuana used alcohol, and almost all of them used tobacco. Thus, to know that a man has used marihuana is to know that he has used at least alcohol, and probably tobacco; if these are accepted as drugs, marihuana use means multiple drug use.

Second, while the associations of alcohol use with use of other drugs are strong, those of marihuana with other drugs are even stronger. More importantly, marihuana use is a more useful predictor of other drug use than is alcohol use. For nonusers of either drug, one can predict with a high probability of being correct that they will not have used other drugs. With respect to alcohol, one is making a prediction about 3 percent of the sample, but with respect to marihuana 45 percent of the men are involved.

This conclusion applies not only to the associations based on the simple distinction between having used and not having used a drug, but also when the measures of extent of use are examined; the associations of marihuana use with the other drugs are stronger than the associations of alcohol use with them.

Finally, some drugs, for example, stimulants, showed stronger associations with use of other drugs than did alcohol and marihuana. However, it will be shown that in terms of temporal order, use of alcohol and marihuana almost always preceded use of other drugs. Because of the temporal order, it is appropriate to predict from marihuana use to use of the other drugs, but it is only in a statistical sense that one can predict marihuana use from use of drugs such as the stimulants.

Another conclusion suggested by the data in Table 9.2 is that use of heroin signifies the deepest involvement in the drug milieu. Persons who had ever used heroin were likely to have used all or most of the other drugs. At least 99 percent of those who had used heroin had also used tobacco, alcohol and marihuana, and at least 80 percent had used psychedelics, stimulants, sedatives, opiates and cocaine. As indicated in Table 9.1, 99 respondents or 4 percent of the sample had used all nine classes of drugs studied. Thus, only 49 of the 148 persons who reported having used heroin had not used all of the other drugs. Stated differently, 67 percent of the men who have ever used heroin have also used <u>all</u> of the other drugs studied.

It is also apparent that those who had used cocaine were likely to have used all of the other drugs, except heroin. The data to support this conclusion are found in the last two columns and last row of Table 9.2. First, the percentages of users of cocaine who had also used tobacco and alcohol were high although the percentages for nonusers were almost as high. Second, 100 percent of the users but only 48 percent of the nonusers of cocaine had also used marihuana; this is a ratio of two to one. Third, 89 percent of the cocaine users in comparison with 11 percent of nonusers had tried psychedelics. Among those who had used cocaine, at least 70 percent had also used stimulants, sedatives and opiates, while the comparable percentages for nonusers are approximately

10 percent. Fourth, only 39 percent of the men who had used cocaine had also used heroin; on the other hand, 90 percent of those who had used heroin reported use of cocaine.

Several disclaimers are needed at this point. First, these data do not show, nor are they intended to suggest that use of marihuana or any other drug automatically leads to subsequent use of other drugs. Second, the data contained in Tables 9.1 and 9.2 utilize only the crudest of measures. In subsequent analyses of these data, lifetime extent of use, frequency and amounts of use within years and across years as well as patterns of starting and stopping will be examined. Third, in future reports an attempt will be made to integrate the analysis of multiple drug use and onset of use for pairs of drugs with other events such as marriage and education.

YEAR OF ONSET

In this section the temporal order of the use of pairs of drugs is examined. One of the major methodological weaknesses of most studies of multiple drug use is the failure to date the initial use of different drugs. Goode (1974:319) clearly makes the point in talking about whether marihuana leads to the use of other drugs, particularly heroin:

> We very rarely know in any of these studies precisely when a given subject uses marihuana for the first time, begins using it regularly, and then when he or she initiates heroin use. From the bulk of the studies now available, all we know is that respondents who use marihuana tend to also be those who use heroin. Both could have been initiated at the same time, or either before the other. In order to get a clearer picture of the process of the progression from cannabis to dangerous drugs, we would have to have a detailed picture of the natural history, or the drug "career" of large numbers of users; the drug "biography," in time sequence, should be on the agenda of any researcher exploring this question.

The specific agenda items recommended by Goode, natural history and time sequence of drug use, were of central importance in this study. Not only are the dates of first and last use for each drug class available, but frequency and quantity patterns were also obtained for each year of use. In addition, because drug use constitutes only one aspect of a biography, the respondents were asked to state the year in which they first ran away from home, were suspended or expelled from school, dropped out of school, owned a car, had sexual intercourse and experienced other events. Questions were also asked about the respondent's involvement with and attachment to parents, peers and school at ages 13 and 16. In subsequent reports the answers provided to these questions will be brought to bear on such complex issues as the natural history of drug use, multiple drug use and the sequence of drug use. For this initial report attention is focused on the temporal order of initial use of pairs of drugs.

For all men who ever used one of eight drug classes, the year of first use was ascertained, and for those who used any drug 10 or more times, the month and year of initial use were recorded. For tobacco, only the year was noted.

The year of first use of each drug was examined according to the year of first use of all other drugs, except tobacco. The men whose use of stimulants, sedatives and opiates was quasi-medical were treated as nonusers of these drugs. Whenever the respondents indicated that the year of first use for a pair of drugs was the same, a month-by-month table was constructed to eliminate ties. For those who used one or both drugs in a pair less than 10 times, the month of June was arbitrarily assigned as the month of onset, but there were few ties among the experimental users.

It is clear that among the men who had ever used alcohol and at least one of the other drugs, alcohol was almost always the first drug used (Table 9.3). For example, of the men who had ever used alcohol and marihuana, 93 percent used alcohol first. The percentages are even higher when initial use of alcohol is compared with onset of use of the other drugs. Therefore, it may be concluded that use of alcohol precedes use of the other drugs for almost all men who have ever used alcohol and some other drug.

Some 80 percent of the men who had used both marihuana and psychedelics used marihuana first. Use of marihuana was antecedent to the use of stimulants, sedatives and opiates for at least 70 percent of the men who had used marihuana and one or more of these drugs. Some 96 percent of those who have used cocaine and marihuana used marihuana first, while 90 percent of those who have used both heroin and marihuana used marihuana prior to their use of heroin. Use of marihuana did not precede stimulant and opiate use as often as it did use of psychedelics, sedatives,

Table 9.3. Users Across Pairs of Drugs and Time Order of Usage (Percentages)[1]

	Number Who Have Used Each Pair of Drugs (n=2510)	Percent Who Used Drug in Capital Letters at Left, FIRST	Percent Who Used Other Drugs at Left, FIRST	Percent Who FIRST Used Both Drugs in the Same Month	Percent Where Time Order of Usage is Not Known
ALCOHOL and					
Marihuana	1377	93	5	1	1
Psychedelics	548	98	2	*	*
Stimulants	578	98	2	0	*
Sedatives	407	97	2	0	*
Heroin	147	97	3	0	0
Opiates	491	94	6	0	*
Cocaine	351	99	1	*	0
MARIHUANA and					
Psychedelics	546	80	14	5	1
Stimulants	562	73	21	6	1
Sedatives	394	84	12	4	1
Heroin	146	90	7	3	0
Opiates	449	77	20	3	*
Cocaine	350	96	1	2	1
PSYCHEDELICS and					
Stimulants	409	36	46	17	1
Sedatives	326	48	34	16	2
Heroin	134	66	26	7	0
Opiates	353	50	33	16	1
Cocaine	314	77	13	9	1
STIMULANTS and					
Sedatives	334	50	29	19	1
Heroin	125	73	21	5	2
Opiates	345	56	34	10	1
Cocaine	301	75	17	7	0
SEDATIVES and					
Heroin	116	63	27	9	2
Opiates	296	45	38	14	3
Cocaine	254	67	22	10	1
HEROIN and					
Opiates	133	29	50	19	2
Cocaine	132	52	32	14	2
OPIATES and					
Cocaine	276	63	20	16	1

[1]For stimulants, sedatives, and opiates, quasi-medical use was defined as no use.

*Less than half of one percent.

heroin and cocaine. While these data do not show that use of marihuana leads to use of heroin or cocaine, it is apparent that use of the one drug usually preceded the other in time. This fact suggests that use of marihuana cannot be dismissed as a possible, perhaps even probable, cause of use of other drugs, particularly heroin and cocaine.

The temporal order of initial use of psychedelics and the other drugs varies. Only for heroin and cocaine was the likelihood high that use of psychedelics was antecedent. Of the men who had used psychedelics and stimulants, 45 percent used stimulants first in comparison with 36 percent who used psychedelics first. Among the men who had used psychedelics as well as stimulants, sedatives or opiates, almost one-fifth used psychedelics and these other drugs for the first time in the same month.

Initial use of stimulants was antecedent to use of heroin or cocaine for about three of four men who had used these drugs. Use of stimulants also tends to antedate first use of sedatives and opiates, but not to the same extent that it precedes heroin and cocaine. Some 19 percent of the men who had used both stimulants and sedatives used both for the first time in the same month. The data do not include sufficient detail to determine if the figure of 19 percent represents use of one of these drugs to counteract the effects of the other or reflects a period of intensive experimentation with stimulants and sedatives.

Sedatives were initially used before heroin and cocaine by 63 and 67 percent, respectively, of the men who had used these drugs and sedatives. Neither sedatives nor opiates can easily be classified as antecedent to the other, as 45 percent used sedatives first and 38 percent used opiates before sedatives. For 14 percent of the men who used sedatives and opiates, initial use of both drugs occurred in the same month.

Use of opiates was antecedent to initial use of heroin for 50 percent of the men who had used both drugs, while 19 percent first used these drugs in the same month. Use of opiates was clearly antecedent to cocaine for most of the men who had used both drugs. Figures on the initial use of heroin and cocaine indicate that heroin was more likely to be the first drug used in that pair.

In summary, several findings deserve special attention. First, the data in Table 9.1 show that the largest number of persons who had used more than one drug had used only alcohol and tobacco; they comprise 33 percent of the total sample. Twenty-two percent of the respondents used only alcohol, tobacco and marihuana. Only 99 (4 percent) of the respondents have used all nine of the drugs studied.

Second, more than 90 percent of the men who had used cocaine, opiates, heroin, sedatives, stimulants or psychedelics had also used marihuana. When users of marihuana are compared with nonusers, higher percentages of the users have used the other drugs.

Third, nine of ten men who had used heroin had also used cocaine, but only 38 percent of the men who had used cocaine had used heroin. This lends support to the idea that heroin signifies the deepest involvement in the drug milieu.

Fourth, in terms of the temporal order of use of pairs of drugs, alcohol was antecedent to use of all the other drugs, including marihuana. For men who have used marihuana and any one of the other drugs, use of marihuana usually occurred first.

Fifth, it was not a rare occurrence for men to begin use of pairs of drugs--psychedelics-stimulants, psychedelics-sedatives, psychedelics-opiates, stimulants-sedatives, sedatives-opiates, heroin-opiates and opiates-cocaine--in the same month.

Finally, it should be repeated that these data do not show that use of any drug causes use of any other drug. However, it is possible that, along with a number of other factors, use of marihuana may have facilitated the movement of persons into use of the other drugs.

10 A Total Drug Use Index

One of the barriers to an adequate understanding of the causes, correlates and effects of drug use is essentially methodological. The problem is one of contructing a realistic overall index of drug use that would allow a researcher to compare persons who have used various drugs to a different extent and with different intensities in either frequency or amount consumed.

This barrier was faced in this study. In Chapter 2 data were presented on the lifetime prevalence of use of nine drug classes. Because the difference between never having used a drug and having used it at least once provides a crude index, more refined measures of the extent of use of the various drug classes were developed. For tobacco, psychedelics, heroin and cocaine, the extent of use was measured simply by the number of times the drugs were used. For alcohol, marihuana, stimulants, sedatives and opiates, the measures were based on the total number of times the drug had been used and whether it was ever used in large amounts. For the latter three drugs, criteria were used to distinguish quasi-medical from other use.

The relationships between these measures of the extent of use and educational attainment, race, age, marital status and employment have been examined; the analysis and interpretation have been based on the consistency of the findings across drug classes. In this chapter an overall drug use index is developed in an effort to eliminate the need to consider each drug class separately and to permit statistical rather than judgmental decisions about the significance of the findings.

The procedure for constructing the Total Drug Use Index (hereafter referred to as TDU) was developed by K. H. Lu and was described in 1974 in The International Journal of the Addictions. The index is constructed by assigning weights to the categories of extent of use of each drug. These weights are not assigned arbitrarily; rather, they are determined by the proportion of cases in the total sample that are found in the various categories. Essentially, the weights reflect the frequency or rarity of a given level of drug use in relation to the frequency of lower and higher levels of use in the sample. The set of weights is designed so that the mean score for the sample is .5, and its variance .0833 for each drug class. In the development of the TDU scores, tobacco use was ignored; the scores for each man in the sample on the other eight drug classes were summed and then divided by eight. The TDU score, therefore, also has a mean of .5; its variance is .0242. The score for each individual is determined by the extent to which he has used each class of drugs in relation to the extent that the same drugs were used by the entire sample.

An alternative way of constructing a TDU index would have been to assign weights to the categories of extent of use of each drug as the combined judgment of the investigators suggested. This would be arbitrary and might reflect biases and misjudgments as easily as judgments; one advantage of Lu's procedure is that it allows the data to determine the weights.

If the investigators had assigned weights, there would certainly have been wider differences between the categories than those produced by Lu's procedure. The weights on which the TDU scores are based are shown in Table 10.1. For alcohol and marihuana the weights differ considerably from one category to the next and reflect the kinds of differences intuition would suggest for

Table 10.1. Index Scores for Each Category of Extent of Use for Eight Drugs Used in Construction of Total Drug Use Index[1]

	No Use	Experimental	Light	Moderate	Heavy	Heaviest
Alcohol	.015 (76)	.049 (93)	.165 (491)	.326 (318)	.509 (599)	.814 (933)
Marihuana	.225 (1128)	.534 (423)	.664 (231)	.755 (227)	.900 (501)	

	No Use	Quasi-Medical	Experimental	Light	Heavy
Stimulants	.363 (1821)	.747 (108)	810 (207)	.899 (242)	.974 (132)
Sedatives	.399 (2002)	.817 (99)	.872 (177)	.939 (158)	.985 (74)
Opiates	.345 (1731)	.747 (286)	.863 (300)	.952 (145)	.990 (48)

	No Use	Under 10 Times	Under 100 Times	Under 1000 Times	1000 Times Or More
Psychedelics	.390 (1960)	.839 (291)	.935 (192)	.985 (57)	.998 (10)
Heroin	.471 (2362)	.955 (72)	.978 (41)	.989 (17)	.996 (18)
Cocaine	.430 (2158)	.902 (214)	.966 (103)	.991 (24)	.998 (11)

[1]Numbers in parentheses represent the number of persons in that category of extent of use.

all drugs. However, it may be observed that for the other drugs the Lu procedure assigns the greatest difference in weights to the step from no use to quasi-medical use or to experimental use; from that point on increases in the amount of use produce relatively small differences in the weights.

The researchers still have reservations about the index as it pertains to stimulants, sedatives and opiates. There is a clear case for regarding quasi-medical use of these drugs as equivalent to no use. It is planned to rescore these drugs under the Lu procedure to determine if it makes any difference. Meanwhile, the findings based on the TDU scores, using the weights shown in Table 10.1, are so striking that it is difficult to believe that any great improvement can be achieved.

It may be seen in Table 10.1 that for a man who had not used any of the eight drugs the scores would add to 2.638 or a TDU score of .330. Similarly, a man who had used each drug extensively enough to fall into the highest category would receive a TDU score of .957.

Parsimony is the value of an overall score. It eliminates the need to note, for example, that the frequency with which psychedelics are used by even the heaviest users is far less than the frequency of alcohol or marihuana use. The drugs are usually taken by different routes, have different pharmacological effects and differ in availability, cost and in other ways. Relevant questions are: Does the Total Drug Use Index somehow fuse these facets of drug use without glossing over such differences? Is the Total Drug Use Index a valid and useful measure?

The TDU scores were first grouped into ten categories; the cutting points were chosen to provide an adequate number of respondents in each category. In Table 10.2 the percentages who have ever used each drug within specified categories of TDU scores are shown; these results are exactly what one would expect if the TDU index is measuring what it is intended to measure. For each drug class the percentage figures increase as one moves from low to high TDU scores. Thus, in the lowest TDU category there were no men who had used marihuana. As the TDU scores increase, the percentage of marihuana users increases; all of the men in the two highest TDU categories have used marihuana. The shifts are even more dramatic when all categories of the extent of use index for marihuana are used. Further, as the TDU scores increase, additional drugs are seen to have been used, and the percentage who used them increases.

The row for heroin deserves comment. As the data in Table 10.2 indicate, only 59 percent of those in the 800+ TDU category have used heroin. There are only 148 users of heroin in the total sample, and only 76 of these have used heroin beyond the experimental level. There are 117 (199 x .59) heroin users in the 800+ category or 79 percent of all heroin users in the sample.

Another strategy for assessment of the validity of the TDU index involves comparison with other drug-related experiences. In Table 10.3 the percentages refer to those who mentioned that they had experienced one or more consequences of drug use (bad trips, fights, couldn't remember, high more than a day, or dependent on or addicted to a drug); that they had one or more problems (health, work, law, wife or girl friend, parents, friends) as a result of their drug use; that they had sold one or more drugs; and that they had turned others on to one or more drugs. There are fairly steady progressions as one moves from the lowest TDU category to the highest. The reversals in the order of the percentages are few and of minor importance. The TDU index, therefore, appears to be a valid measure of the involvement of these men with the eight drug classes.

TDU Scores and Correlates of Drug Use

In this section the TDU scores will not be grouped into ten categories; rather, the differences in mean TDU scores are examined for various groupings of the respondents on a number of variables. There are several advantages in using the mean TDU scores to compare groups that would be expected to differ on drug use. First, it is possible to assess the findings reported in earlier chapters on the basis of an examination of each of the drug classes separately. Differences in the mean TDU scores by the respondents' birth year, race, education and other variables provide an opportunity to compare groups known to differ in certain ways in their use of specific drug classes. Second, use of the mean TDU scores provides an opportunity to move beyond reliance on percentage differences and a descriptive analytical strategy and thus to demonstrate the utility of the index. Included in Chapter 10 will be two statistical tests. When the sample is divided into two groups, a t test score will be used. The t test value indicates whether the mean TDU scores for the two groups differ significantly. For example, when the mean TDU scores for those who have ever been married are compared with

Table 10.2. Use of Specific Drugs and Total Drug Use Index (Percentages)

	n	330 + (413)	360 + (189)	390 + (310)	430 + (318)	440 + (244)	480 + (187)	510 + (228)	570 + (215)	660 + (207)	800 + (199)
Alcohol	2434	84	97	99	100	100	100	100	100	100	100
Marihuana	1382	0	26	30	30	77	68	94	98	100	100
Psychedelics	550	0	0	*	0	3	5	21	49	87	99
Stimulants	581	0	0	0	0	3	11	24	58	84	99
Sedatives	409	0	0	*	*	1	2	7	30	64	93
Heroin	148	0	0	0	0	0	1	1	2	11	59
Opiates	493	0	0	1	1	8	9	16	33	72	98
Cocaine	352	0	0	0	0	*	1	2	13	58	98

*Less than half of one percent.

For stimulants, sedatives, and opiates, quasi-medical use was defined as no use.

Table 10.3. Total Drug Use and Problems, Consequences, Selling, and Turning Others On

	n	TOTAL DRUG USE INDEX									
		330 + (413)	360 + (189)	390 + (310)	430 + (318)	440 + (244)	480 + (187)	510 + (228)	570 + (215)	660 + (207)	800 + (199)
Consequences, one or more mentioned (bad trips, etc.)	1645	20	41	54	71	74	79	82	89	92	97
Problems, one or more mentioned (health, work, etc.)	1257	11	31	36	50	56	59	68	67	77	89
Sold one or more drugs	495	1	2	5	4	11	11	19	33	59	86
Turned others on to one or more drugs	520	1	3	10	8	16	15	24	39	57	66

those who have never been married, the value of t is 9.36. If there were really no difference between these groups, a value this large would be observed in less than one of a thousand random samples. In short, it is almost certain that the drug use of the men who have ever married differs substantially from those of 20 to 30 year old men who have never married.

An extension of the t test to more than two groups is provided by analysis of variance. In an analysis of variance the mean scores for more than two groups of respondents are examined, and an F test determines whether there is a significant difference among the groups. The t and F tests permit one to verify or temper interpretations based primarily on the observation of consistent relationships between a variable and drug use across the classes of drugs. A third advantage of the mean TDU scores within groups is that it provides an opportunity to present information in a succinct manner about variables not mentioned previously in this report.

The data presented in Table 10.4 generally support the conclusions reached in Chapters 2 and 5. The mean TDU values indicate that those born in 1950 and 1953 have been more involved with drugs than those in any of the other cohorts. There is a tendency for the mean TDU scores to increase from the 1944 cohort to a plateau for the men born in 1950-53. While the progression is not perfect, birth year and Total Drug Use seem to be linearly related. When the birth years are translated into ages and combined into four groups, the relationship is clarified. The mean TDU scores by age group are: 28-30, .459; 25-27, .491; 22-24, .526; and 20-21, .516. The mean TDU score of the 20-21 year

Table 10.4. Birth Year, Race, Residence and Total Drug Use

	n	Percent	Mean	Value of F	Significance Level
Birth Year					
1944	174	7	.450	7.61	.001
45	171	7	.458		
46	196	8	.468		
47	254	10	.480		
48	223	9	.499		
49	215	9	.495		
1950	234	9	.531		
51	245	10	.525		
52	261	10	.524		
53	247	10	.531		
54	290	12	.504		
Race					
White	2103	84	.499	2.45	N.S.
Black	303	12	.514		
Other	104	4	.476		
Residence to Age 18					
1 million or more	187	7	.550	9.32	.001
500,000 or more	183	7	.522		
100,000 or more	427	17	.518		
50,000 or more	201	8	.496		
25,000 or more	265	11	.509		
2,500 or more	730	29	.496		
Less than 2,500	456	18	.464		
Outside the U.S.	61	2	.444		

[1]In this and subsequent tables, N.S. means Not Significant.

old men was higher than that for men who were 25 to 30 years old at the time of the interview. This suggests that, in terms of Total Drug Use, the men in the two youngest cohorts may eventually equal or surpass the men in the 22-24 year old group. This possibility is consistent with the data presented in Chapter 2 regarding lifetime prevalence and in Chapter 5 with respect to the drug epidemic and age at first use.

The mean TDU values for the three ethnic categories suggest that the idea that significantly more blacks use drugs may be incorrect. The value of F is not statistically significant. There are several plausible explanations for the discrepancy between this finding and the results of previous studies. First, in most of the studies in which drug use by ethnic groups has been analyzed, the samples have not been representative of the total population. The blacks in most of these studies have been disproportionately selected from ghetto areas in metropolitan cities in selected regions of the country. Often they have been incarcerated offenders.

A second explanation is that the age range covered in this study may be too restricted for significant ethnic differences to emerge. If this sample were representative of men 20 to 40 years old instead of 20 to 30, previous studies would suggest that the TDU scores among blacks would be substantially higher than would be observed for whites or men from other ethnic categories. Whatever the reason, it must be concluded from these data that there is no significant ethnic difference in Total Drug Use among men who were 20 to 30 years old in 1974. This does not, however, conflict with the interpretation offered in Chapter 2 that the lack of difference reflects two opposite relations of drug use with age, namely an increase among younger whites and a decrease among younger blacks.

The data on the relationship of size of city of residence to age 18 and Total Drug Use indicate that there is a significant difference in drug use depending on the milieu in which one is raised. In general, men who lived in the largest cities were more likely to have used drugs and to have used them more extensively than were men who resided in smaller cities. The mean TDU scores for men who lived in cities with at least 100,000 population are considerably higher (.518 to .550) than for those who lived in cities with less than 100,000 population (.464 to .509). Thus, the data in Table 10.4 confirm the findings regarding city size and drug use discussed in Chapter 2.

The variables related to Total Drug Use in Table 10.5 reflect maturation and the transition of the men in this sample into conventional adult roles in society. Because these variables represent statuses achieved after adolescence, the differences in drug use that emerge may indicate the operation of countervailing demands for commitment to conformity and choices made by these men about life styles and career goals.

The mean TDU scores confirm another finding on the relation between education and drug use discussed earlier in this report. Men with "some college" had more experience with drugs than men who did not graduate from high school; the means were .516 and .504, respectively. The means for high school and college graduates were even lower, .499 and .474, respectively. The value of F indicates that the differences between the groups are statistically significant. Stated differently, the amount of drug use differs significantly by education.

The relationship of employment status to Total Drug Use confirms the findings mentioned earlier. The mean TDU score for the unemployed (.579) is higher than for those who worked less than 30 hours a week (.545), those who were students (.507) and those who were working 30 or more hours a week (.488). The differences suggest that a regular job may serve as a restraining influence on the extent to which men use drugs, or that drug users are less likely to seek or find full-time employment.

The data in Table 10.5 that deal with the relationship of marital status to Total Drug Use confirm the conclusions reached earlier in the report when each of the various classes of drugs was examined separately. Total Drug Use among the men who have never married is significantly higher than for the men who have been married. Another comparison can be made between those who have ever lived with a woman for six months or more without being married (coupled) and those who have never coupled. The mean TDU score for those who have ever coupled is .613; in comparison, it is only .476 for those who have never coupled. These data suggest that marriage, a conventional form of behavior, may also act as a significant restraining factor on drug use. It is also apparent that it is the fact of marriage and not simply the influence of living with a woman that is the key variable. The willingness to live with a woman for six months or more without being married may reflect a general tendency to be unconventional and use of drugs may be another indicator of unconventionality.

In terms of current family status, the "coupled" category is not restricted to those who had lived with a woman for 6 months or more; rather, it means that the man was, at the time of the interview, living with a woman to whom he was not married. Only 5 percent or 120 respondents were currently coupled. The mean TDU score for the men who were currently coupled was much higher (.632) than for men who were single and living away from parents (.547), single men who were still living with their parents (.468) or men who were currently married (.466). The value of F indicates that Total Drug Use was significantly different for the men in these four categories. Emancipation from parents and the lack of the restraining influence of marriage may be productive of a greater tendency toward drug use. On the other hand, drug use may be conducive to living in an unconventional heterosexual relationship. Another possibility is that there is a general tendency to be unconventional, and the use of drugs and coupling may be indicators of this tendency.

Criminal Activities and Total Drug Use

The relationship of reported involvement in various criminal activities to Total Drug Use is presented in Table 10.6. Those who reported each of the criminal activities are compared with those who denied them. The differences in the mean TDU scores support the conclusions reached in Chapter 8, in which the focus was on the relationships

Table 10.5. Education, Employment, Marital Status, Current Family Status and Total Drug Use

	n	Percent	Mean	Value of F or t	Significance Level
Education					
Less than high school	394	16	.504	6.96 (F)	.001
High school graduate	933	37	.499		
Some college	713	28	.516		
College graduate	470	19	.474		
Employment					
Working 30 hours or more a week	1715	68	.488	23.50 (F)	.001
Students, except those working over 30 hours	282	11	.507		
Working less than 30 hours, not a student	35	1	.545		
Unemployed	213	8	.579		
Marital History					
Ever married	1477	59	.476	9.36 (t)	.001
Never married	1033	41	.534		
Cohabitation History					
Ever coupled	444	18	.613	17.91 (t)	.001
Never coupled	2066	82	.476		
Current Family Status					
Married	1309	52	.466	85.43 (F)	.001
Coupled	120	5	.632		
Independent	796	32	.547		
Living with parents	285	11	.468		

Table 10.6. Total Drug Use and Criminal Activities

		n	Percent	Mean	Value of t	Significance Level
Been drunk or intoxicated in a public place?	Yes	1754	70	.538	19.80	.001
	No	756	30	.413		
Driven a car while drunk?	Yes	1512	60	.542	17.41	.001
	No	998	40	.437		
Stolen a car?	Yes	145	6	.638	11.25	.001
	No	2365	94	.492		
Broken into a house, school, or place of business?	Yes	314	13	.624	15.90	.001
	No	2196	87	.482		
Been armed with or used a weapon of any kind while committing a theft or robbery?	Yes	36	1	.706	8.13	.001
	No	2474	99	.497		
Shoplifted something from a store?	Yes	1103	44	.557	17.38	.001
	No	1407	56	.455		
Stolen anything from a person--face-to-face?	Yes	83	3	.676	10.74	.001
	No	2427	97	.494		
Run numbers, or had a job which involved illegal gambling?	Yes	74	3	.590	5.06	.001
	No	2436	97	.497		
Forged, or passed bad checks?	Yes	69	3	.673	9.56	.001
	No	2441	97	.495		
Forged prescriptions or passed scrip?	Yes	37	1	.728	9.14	.001
	No	2473	99	.497		
Sold one or more drugs?	Yes	478	19	.691	37.19	.001
	No	2032	81	.455		
Turned others on for their first time?	Yes	504	20	.649	27.40	.001
	No	2006	80	.463		

among crime, drugs and criminal justice outcomes.

An examination of the mean TDU scores in Table 10.6 reveals that for those who said they had not been involved in each of the criminal activities, the range is narrow; it is .413 for public drunkenness and .497 for armed robbery. The mean TDU scores for those who report a criminal act range from .538 to .728. Other than the offenses involving intoxication, the only criminal act that is drug-related, forging prescriptions, has the highest mean TDU score. In short, those who report involvement in any one of these criminal activities are significantly more likely to have a high mean TDU score than those who do not.

The men were asked if they had ever sold drugs illegally and if they had ever "turned on" anyone to drugs. Those who answered positively to either of these items were distinguished from others by greater differences in TDU scores than were observed for most of the criminal offenses.

Activities of Friends at Age 16 and Total Drug Use

The respondents were asked: "Think about your friends, the people you spent time with

Table 10.7. Total Drug Use and Peer Activities at Age 16

		n	Percent	Mean	Value of t	Significance Level
When you were 16, were at least some of your friends:						
Sometimes in trouble at school?	Yes	1670	67	.520	9.15	.001
	No	840	33	.461		
Sometimes in trouble with the police?	Yes	781	31	.563	14.14	.001
	No	1729	69	.472		
Arguing a lot or getting on badly with their parents?	Yes	909	36	.539	9.60	.001
	No	1601	64	.478		
Drink beer, wine, or liquor at times?	Yes	1917	76	.519	11.11	.001
	No	593	24	.439		
Smoking marihuana?	Yes	561	22	.604	19.23	.001
	No	1949	78	.470		
Using other drugs?	Yes	342	14	.641	19.37	.001
	No	2168	86	.478		
People your parents didn't approve of?	Yes	878	35	.551	12.51	.001
	No	1632	65	.472		

and did things with at these same two times. When you were 13, and then when you were 16, were at least some of your friends (a) sometimes in trouble at school?" (see Table 10.7). Age 13 was chosen because it was expected that most of the men in this sample would have used few, if any, drugs before that time, except perhaps tobacco or alcohol. It was anticipated that age 16 might constitute the age of entry into the population at risk for marihuana use as well as other drugs. This expectation was confirmed by the data presented in Chapters 2 and 5; therefore, the data in Table 10.7 refer only to the activities of friends of the respondents when they were 16. Thus, these peer activities were temporally prior to most of the respondents' drug use.

Twenty-two percent of the men reported that some of their friends were using marihuana, 76 percent reported some were using alcohol and 14 percent reported some were using other drugs when the respondents were 16 years old. The value of t for the difference between the mean TDU scores is statistically significant for all of these activities. Stated differently, the mean TDU score for the men who report that some of their friends were doing these things is consistently higher than for men who reported they did not have friends involved in such activities.

Countercultural Involvement and Total Drug Use

One of the most valuable aspects of this study is that the eleven birth cohorts were adolescents or young adults when some of the most tumultuous events in modern American history occurred. The oldest men in this sample were 19 when John F. Kennedy was assassinated, 24 when riots occurred at the Democratic national convention and 28 when Richard Nixon was elected to his second term in office. When these events took place, the youngest men were between 9 and 18 years of age.

The young men in the sample have witnessed the Civil Rights movement, political assassinations, urban riots, the war in Vietnam, the hippie movement, a sexual revolution, the appearance of women's and Gay liberation movements, the drug epidemic and many other far-reaching social changes. Much of the

behavior exhibited by young people during this period of time was labeled countercultural and received considerable attention in the press and by social scientists interested in the study of alternative life styles.

To assess involvement in countercultural activities, the respondents were asked if they had ever done the things listed in Table 10.8. Except for registering to vote and political campaigning, a positive answer may be considered representative of a countercultural type of activity. In every instance the mean TDU score for those who had participated in a countercultural activity was significantly higher than for those who had not. The mean TDU scores for those who had participated in a countercultural activity ranged from a low of .574 (attended an outdoor rock concert or festival) to a high of .662 (lived in a commune). For those who did not report these activities, the mean TDU scores ranged from a low of .435 to a high of .491, for the same two activities.

The data presented in Table 10.8 confirm that participation in unconventional activities is related to drug use. It should be noted that temporal order has not been examined;

Table 10.8. Total Drug Use and Countercultural Involvement

		n	Percent	Mean	Value of t	Significance Level
HAVE YOU EVER:						
Lived in a commune?	Yes	129	5	.662	12.55	.001
	No	2381	95	.491		
Attended an outdoor rock concert or festival?	Yes	1173	47	.574	24.88	.001
	No	1337	53	.435		
Meditated, or explored an eastern religion or philosophy?	Yes	393	16	.598	14.12	.001
	No	2117	84	.482		
Joined a street gang?	Yes	273	11	.584	9.57	.001
	No	2237	89	.490		
Registered to vote?	Yes	1795	72	.496	1.93	.05
	No	715	28	.509		
Followed a vegetarian, macrobiotic, or organic diet?	Yes	200	8	.643	14.11	.001
	No	2310	92	.488		
Campaigned or worked for a political candidate, issue, or cause?	Yes	553	22	.531	5.26	.001
	No	1957	78	.491		
Taken part in a political demonstration?	Yes	368	15	.592	12.67	.001
	No	2142	85	.484		
Studied astrology, ESP or the occult?	Yes	406	16	.590	13.21	.001
	No	2104	84	.483		
Bummed around the United States or elsewhere?	Yes	399	16	.631	19.68	.001
	No	2111	84	.475		
Thought pretty seriously about committing suicide?	Yes	211	8	.627	12.80	.001
	No	2299	92	.488		

Table 10.9. Attitudes Toward Unconventional Behaviors and Total Drug Use

		All Right or Good	A Little Bit Bad	Pretty Bad	Very Bad	Don't Know No Response
HOW BAD IS IT IF:						
A person drives over the speed limit?	Mean	.541	.508	.486	.467	.506
	n	195	1382	588	339	6
	Percent	8	55	23	14	*
A person doesn't work steadily when he could?	Mean	.583	.548	.491	.466	.506
	n	166	502	976	859	7
	Percent	7	20	39	34	*
A man has sex relations with several women when he's single?	Mean	.535	.459	.409	.408	.450
	n	1621	487	223	170	9
	Percent	65	19	9	7	*
A person gets into fights?	Mean	.538	.497	.497	.502	.491
	n	59	491	1023	927	10
	Percent	2	20	41	37	*
A man has sex relations with other women after he's married?	Mean	.588	.553	.501	.455	.515
	n	192	532	769	1007	10
	Percent	8	21	31	40	*
A person cheats on his income tax?	Mean	.583	.527	.486	.458	.511
	n	271	735	738	761	5
	Percent	11	29	29	30	*
A person bets on the numbers or some other gambling that's illegal?	Mean	.580	.516	.462	.434	.511
	n	496	946	573	490	5
	Percent	20	38	23	20	*
A man has sex relations with another man?	Mean	.597	.561	.513	.477	.578
	n	252	185	318	1745	10
	Percent	10	7	13	70	*
A man refuses to be drafted into the armed forces?	Mean	.584	.519	.466	.445	.459
	n	672	456	482	887	13
	Percent	27	18	19	35	1
A person lives or acts in a way that could damage his health?	Mean	.601	.550	.494	.477	.532
	n	129	380	801	1191	9
	Percent	5	15	32	47	*

*Less than one-half of one percent.

these relationships do not reveal anything about cause and effect.

In view of the fact that the answers were given by a nationwide random probability sample of young men 20 to 30 years old, the percentages who reported having ever taken part in unconventional activities are of interest. For example, only 5 percent had ever lived in a commune, a figure which may seem low, given the publicity about communes in the late 1960s. Two of the items indicate that a substantial proportion of these young men were legitimate participants in the electoral process; 72 percent had registered to vote and 22 percent had campaigned for an issue, candidate or cause of their choice. Some 15 percent of these young men had taken part in a political demonstration. This item was worded neutrally; thus, the response could refer to violent or nonviolent protests or merely attendance at a political rally. Two of the items were "meditated, or explored an eastern religion or philosophy," and "studied astrology, ESP or the occult." Each was endorsed by 16 percent of the sample. Sixteen percent of the 2,510 men in this sample have "bummed around the United States or elsewhere," and 8 percent or 211 have "thought pretty seriously about committing suicide."

Attitudes Toward Unconventional Behavior and Total Drug Use

The respondents were asked to evaluate ten types of unconventional behavior in terms of the response categories shown in Table 10.9. For those who endorsed the items as "all right or good," the mean TDU scores ranged from .535 for "a man has sex relations with several women when he's single" to .601 for "a person lives or acts in a way that could damage his health." As would be expected, the mean TDU scores were substantially lower for those who said these unconventional behaviors are "very bad." For all of the items, the mean TDU scores declined as the response alternatives became more conventional.

Other noteworthy findings pertain to the percentages who said the unconventional behavior was all right or good. Twenty-seven percent of the men endorsed refusal to be drafted, 20 percent endorsed illegal gambling, and 11 percent endorsed cheating on one's income tax. Eight percent endorsed extramarital relations and driving over the speed limit, as did 10 percent with respect to homosexuality. The most widely endorsed form of unconventional behavior was premarital sex. The item of most relevance to drug use deals with potential damage to one's health. Use of drugs is a form of risk-taking, both in terms of potential encounters with the law and the effects of the drug itself. The men who endorsed this item had the highest mean TDU score of any group on any of the ten items.

In sociological and psychological research attitudes are generally treated as predictors of behavior or as predispositions to act in a certain way under appropriate circumstances. Attitudes of the kind described in this section could be combined into a measure of conventionality; if conventionality were shown to pre-date drug use, one could confidently predict that the more conventional men would show less drug use. One could then argue that conventionality "insulates" a man against drug use.

It seems likely that the men who said most of the acts in Table 10.9 are "pretty bad" or "very bad" have held these attitudes for a long time, and probably before any choices had to be made about using or not using drugs. However, for those who answered "all right or good," it is possible and indeed probable that their expressed attitudes represent a change from their original attitudes, and this change might be attributed to their drug use and other unconventional behavior. For both groups the attitudes were expressed on the date of the interview, but for the first group they probably represent long-standing attitudes, which were among the causes of their lesser drug use, while for the second they might represent effects of their experiences with drugs. It would, therefore, be incorrect to treat these attitudes either as dependent or independent variables in relation to drug use; they presumably include both causes and effects of drug use. Later analyses will attempt to study the effects of conventionality on drug use by means of dated measures such as those in Table 10.7.

11 Drug Use and Military Service

A question of major interest in recent years has been the extent to which drug use was related to military service and particularly to overseas service in Vietnam. In The Vietnam Drug User Returns, Robins (1974) reported that, in the time period she studied, almost half of the men used some narcotic in Vietnam. About one-third of the men tried heroin and one-third opium, but there was considerable overlap between these groups. For most of the men, use was continued over a considerable period of time, and use of marihuana was even more frequent. About one-quarter used barbiturates or amphetamines, and these also overlapped with the opiate users.

When the Vietnam veterans returned to the United States, their levels of drug use declined to their pre-service rates, and even among users addiction was infrequent. This was true when they were interviewed eight to 12 months after return from Vietnam. Their overall rates of use continued to be low in another follow-up two years later.

No other rigorous studies of drug use in other military settings are known to the writers, but the news media have regularly stated or implied that rates of drug use have been high among men in the military, expecially those serving overseas.

The expectation was that in this sample military service would be related to lifetime prevalence, though not necessarily to current use. Thirty-four percent of the sample (864 men) had had military service, and these were divided fairly evenly among those with no overseas service, those who had served overseas but not in Vietnam, and those who served in Vietnam.

The expectation of a relationship between military service and drug use is consistent with the opinions of the veterans themselves 34 of the 294 men who did not serve overseas, 61 of the 250 who did and 101 of the 320 who served in Vietnam said that there were drugs they would not have used if they had not been in service. Among the Vietnam veterans 46 attributed their use of marihuana, 21 their use of heroin and 41 their use of opiates to their military service. Smaller numbers attributed use of all of the other drugs to their military service.

If these opinions were taken at face value and if the 320 Vietnam veterans had not been in service, their percentages of lifetime use would have been 47 percent for marihuana, 3 percent for heroin, and 20 percent for opiates. These figures are all well below the percentages of use reported by the men who had no military service. It is, therefore, difficult to accept them as reasonable estimates; it seems plausible to regard these as cases in which use began in the service, and thus it seemed reasonable to the men to attribute their drug use to their service experience. Yet, all of the other data suggest that many of them would have used these drugs whether or not they had been in service.

The expected relationship was not found in terms of the Total Drug Use index. The men with no military service had a mean score of .496; the comparable scores were: for men with service but not overseas, .497; for men with overseas service but not in Vietnam, .506; and for men with Vietnam experience, .519. If one treats the four categories of service as an ordinal variable, there is a linear progression, and the highest scores are found among Vietnam veterans. However, the association is not a statistically significant one; the value of F is only 2.07.

Table 11.1. Drug Use and Military Service

A. Lifetime Use of Drugs (Percentages)

	Total (2510)	None (1646)	No Overseas (294)	Overseas, but Not Vietnam (250)	Vietnam Service (320)
Tobacco	88	86	91	92	92
Alcohol	97	96	98	98	99
Marihuana	55	54	51	56	61
Psychedelics	22	22	20	23	21
Stimulants	27	28	28	27	27
Sedatives	20	20	20	20	21
Heroin	6	5	4	7	10
Opiates	31	30	33	33	33
Cocaine	14	14	12	11	16

B. Current (1974-75) Use (Percentages)

	Total (2510)	None (1646)	No Overseas (294)	Overseas, but Not Vietnam (250)	Vietnam Service (320)
Cigarettes	60	55	64	69	71
Alcohol	92	91	93	92	93
Marihuana	38	40	32	37	38
Psychedelics	7	8	7	8	5
Stimulants	12	12	9	11	12
Sedatives	9	9	9	8	10
Heroin	2	2	2	2	1
Opiates	10	10	13	11	8
Cocaine	7	8	6	7	6

In terms of the TDU index, the tentative conclusion is that military service had no effect on lifetime drug use.

This can be checked against the use of the nine classes of drugs, for current (1974-75) and lifetime use (Table 11.1). As shown in Panel B, there is some indication of increased use of cigarettes among men with military experience. There is no sign of any effect of military service, overseas service or Vietnam service on current use of other drugs, except possibly a minor increase in alcohol use, but this is of dubious statistical significance. For all of the other drugs, current use was as high or higher among men with no military service as it was among those in the three categories of military service.

The picture is not as clear for lifetime use, which is shown in Panel A. Yet, the impact of military service cannot be great. With the possible exceptions of tobacco and alcohol, the percentage of users of all other drugs among men with no service equaled or exceeded the percentage for at least one of the military groups; opiates were an exception, but the difference was small. The data offer no support for the hypothesis that military service or overseas service had any appreciable effect on drug use. Vietnam veterans did, however, show slightly higher percentages of use of marihuana and heroin than other groups.

In view of the fact that use of marihuana and heroin in Vietnam is known to have been high, the relevant question is: Why are the percentages not higher for these drugs? In a table not included in this report these two drugs were examined, with controls for race and age. Of the four age groups, those born in 1953-54 included only three men with Vietnam service, and there were only 41 blacks of all ages with such service. These numbers are inadequate to calculate stable percentages. Among whites the Vietnam veterans showed the highest percentage of marihuana use in each of the three older age groups, but only those born in 1950-52 showed an appreciably higher percentage for heroin use. This pattern suggested that the Vietnam veterans in this sample served there before the use of drugs became widespread. Table 11.2 was prepared to assess this possibility.

The dates of service in Vietnam were not obtained in the interview, but the dates of

Table 11.2. Vietnam Service and Drug Use

A. Year Military Service Ended, by Year of Birth (Percentages)

Year Service Ended	Total (320)	YEAR OF BIRTH 1944-46 (112)	1947-49 (155)	1950-52 (50)	1953-54 (3)
Before 1968	9	26	1	0	0
1968-69	32	38	39	0	33
1970-71	33	21	37	52	0
After 1971	18	10	16	44	33
Unknown	7	6	7	4	33

B. Drug Use, by Year Service Ended (Percentages)

	Total (320)	Date Unknown (21)	Before 1968 (30)	1968-69 (103)	1970-71 (107)	After 1971 (59)
Marihuana	61	48	47	60	62	75
Heroin	10	5	3	1	13	25

entry into the service and discharge were noted. Thus, limits can be set on when service in Vietnam occurred, except for those men still in the service. The data in Panel A in Table 11.2 suggest that most of the men were draftees, whose service ended when they were in their early twenties. Of the oldest group almost two-thirds had left Vietnam in 1969 or earlier, and this was true for 40 percent of the next age group. This means that many of them had left before drug use, especially heroin use, had become common in Vietnam. The figures in Panel B clearly establish that the somewhat higher percentages of marihuana and heroin use among Vietnam veterans are accounted for by those whose service was in recent years, not the early years of the Vietnam war. For heroin, in particular, high percentages of use were found only for men whose Vietnam service could have been in 1970 or later, and about half of the men in this sample had left Vietnam before 1970.

These findings can be reconciled with those of Robins, who reported higher rates of heroin use among Vietnam veterans. Her sample was drawn from men who left Vietnam in September, 1971, a date chosen precisely because it was in the summer and fall of 1971 that drug use in Vietnam reached epidemic proportions. Robins (1974:25) herself states:

> While a long tour of duty in the 1970-71 era might increase exposure to heroin, it is not clear that an earlier tour in Vietnam would have this effect, since it was believed (Baker) that before 1969 there was relatively little heroin in Vietnam.

Another factor to be considered is that among the draftees in Robins' sample, the group that most closely resembles the Vietnam veterans in this sample, 71 percent were born in 1949 or 1950. These men correspond in age to only two of the eleven cohorts in this study. The possibility, therefore, exists that there was a "Vietnam effect" on drug use in a few cohorts in this sample, but that this is concealed when the sample as a whole is considered.

In Table 11.3 the data on lifetime use of heroin in the sample are presented in Panel A for the four categories of military service and for each of the eleven birth cohorts. The data are presented in terms of the percentage who used heroin, except that in each case where the percentage for one of the three military groups is higher than the percentage for the nonveterans, the number of users and the number of men in the cell are shown. Thus, for Vietnam veterans born in 1945, instead of an entry of 3 percent, the figures show that this percentage reflects one man of the 34 in the cell.

If percentages alone were shown, the column for Vietnam veterans would show low figures for heroin use--5 percent is the highest--for the 1944 through 1948 cohorts. There is then a steady increase: 1949, 10 percent; 1950, 36 percent; 1950 and 1951, 50 percent; 1953, 100 percent; and 1954, zero percent. However, the 1944 through 1948 cohorts include 227 (71 percent) of the 320 men in the sample who served in Vietnam. Only 7 of the 227 had a history of heroin use. Thus, in these five cohorts 3 percent of the Vietnam veterans had used heroin; the comparable figure for nonveterans was 4 percent. For most of the men who served in Vietnam, therefore, there is no indication that this led to increased use of heroin.

The number of Vietnam veterans in the 1949 and 1950 cohorts is sizable; consequently, the percentages of 10 and 36 in those two years may be considered reasonably accurate estimates. In contrast, 5 and 3 percent, respectively, of the nonveterans born in 1949 and 1950, used heroin. Therefore, it may be concluded that Vietnam service increased heroin use for the men in these two cohorts, particularly those in the 1950 cohort.

For the younger cohorts the numbers in the cells are so small that one would not usually treat the percentages as meaningful. The 50 percent rates of heroin use for Vietnam veterans born in 1951 and 1952 are based on 8 and 6 cases, respectively; the 100 percent rate for 1953 represents one case, and the zero percent for 1954 is based on two cases. Whether or not one accepts the percentages for these four cohorts as an indication that rates of heroin use associated with Vietnam service were high, one would still conclude that they would have no impact on overall rates of heroin use because the number of men with Vietnam service is so small.

For practical purposes, the fact that 10 percent of all Vietnam veterans in the sample used heroin, in contrast with 5 percent among those with no military service, is almost entirely accounted for by the 1949 and 1950 birth cohorts. This is precisely the age group that constituted the majority of Robins' sample of Vietnam veterans.

The same kind of analysis can be applied to the other two columns in Panel A in Table 11.3. Military service as such clearly did not increase heroin use; men with stateside service only showed a lower percentage of use than men with no service. Men with overseas service

Table 11.3. Lifetime Use of Heroin and Marihuana by Military Service and Birth Cohort

A. Lifetime Use of Heroin (Percentages or Fractions)

Year of Birth	Total (2510)	MILITARY SERVICE None (1646)	No Overseas (294)	Overseas (250)	Vietnam (320)
1944	2	2	0	(1/23)	0
45	1	0	(1/22)	0	(1/34)
46	6	8	4	3	4
47	4	4	(2/31)	0	3
48	5	5	0	(3/23)	5
49	4	5	0	0	(4/40)
1950	10	3	3	(5/18)	(13/36)
51	9	7	(3/28)	4	(4/8)
52	9	7	7	(4/22)	(3/6)
53	9	8	(2/19)	(1/8)	(1/1)
1954	4	4	(1/18)	(2/18)	0
Total	6	5	4	7	10

B. Lifetime Use of Marihuana (Percentages)

Year of Birth	Total (2510)	MILITARY SERVICE None (1646)	No Overseas (294)	Overseas (250)	Vietnam (320)
1944	39	40	33	43	39
45	34	33	32	33	38
46	44	45	33	32	58
47	49	44	45	50	58
48	57	53	56	61	68
49	56	53	51	58	68
1950	66	60	66	83	83
51	62	61	61	67	87
52	64	62	56	82	100
53	62	58	84	100	100
1954	59	60	50	56	50
Total	55	54	51	56	61

in places other than Vietnam showed a slightly higher percentage--7 in contrast to 5. The numbers are small, but it may be noted that it again is the 1950 cohort that contributes the largest number of heroin users.

The data on marihuana use are presented in Panel B in Table 11.3, and a stronger Vietnam effect is suggested. The 1946 through 1950 cohorts show percentages which exceed those for nonveterans by 13 to 23 points, and the differences are not a result of small cell size. The higher percentages in the younger Vietnam cohorts are, of course, based on the same small numbers previously discussed with regard to heroin.

The veterans with no overseas service showed a lower percentage of marihuana use than the nonveterans, and the percentage for those with overseas service was negligibly larger. Therefore, it appears that military service as such did not increase marihuana use, but that Vietnam service had some effect, primarily in the 1946-50 cohorts. It should be emphasized that all that has been shown is an association between having been in Vietnam and having used drugs; no evidence has been presented that any of the use of the drugs began or even occurred while the men were in Vietnam.

The dates of Vietnam service were not obtained in the interview. The dates of service were obtained, as were the dates of onset of drug use. These were used to determine when drug use began in relation to military service (Table 11.4). When the month of entering or leaving service was the same as the month of initial drug use, it is not known which occurred first. Therefore, there are five categories in the table; in three of them the onset of use was clearly before, during or after service, and in two categories it was in the same month that the man entered or left the service.

Of the Vietnam veterans who used marihuana at least one-fifth, and possibly three-tenths, had used it before they entered the service. At least half, and possibly two-thirds, began its use while in service. Only 10 to 15 percent began after leaving the military. The picture is similar for heroin. From 6 to 15 percent had used it before entering service, 64 to 85 percent began while in service, and 6 to 18 percent initially used it after leaving the service. It seems plausible to assume, but it is only an assumption, that much of the marihuana and heroin use that began in the service began in Vietnam.

In summary, the data show no association between military service and current drug use. Lifetime drug use seems to have been unaffected by military service or by overseas service, unless that service was in Vietnam. Specifically, Vietnam veterans show slightly higher percentages of marihuana and heroin use. However, the increase in heroin use was concentrated among the men born in 1949 and 1950, and the increase in marihuana use was concentrated among the men born in 1946 through 1950. If one looks at the sample as a whole, military service apparently had little effect on drug use.

Included in this sample are precisely those men who were exposed to the last decade of the military draft as well as those who were exposed to service in Vietnam. Men with

Table 11.4. Onset of Drug Use, Relative to Dates of Entering and Leaving Service (Percentages)

Onset of Drug Use	Marihuana (197)	Heroin (33)
Before entering service	22	6
Immediately before or after entering service	9	9
While in service	53	64
Immediately before or after leaving service	5	12
After leaving service	11	6
Unknown	1	3

military service constitute a third of the sample; yet, all of their drug use, when added to that of those with no military service, increased the percentages of use for the total sample by no more than one percentage point in Table 11.1. This is not inconsistent with the fact that drug use was heavy in Vietnam, but heroin use seems to have been heavy for a relatively short time; it affected only those men who were there in the last years of the war; and they constitute a minority of the men who served in Vietnam.

Presumably there were many factors that operated to produce the increase in drug use among young men in the late 1960s and early 1970s; military service was not important, and Vietnam service was of relatively minor importance among those factors. Those who were exposed to drug use in the military or in Vietnam may have begun to use drugs earlier than they otherwise would have done, but not many more began to use than would have been expected to do so without experience in the military. When the focus is on men who were in Vietnam in 1970 and 1971, drug use rates are high. However, when the focus is broadened to encompass all of the young men in the sample, the effects of military service on drug use are invisible, and the effect of service in Vietnam is little more than a ripple in a stream.

12 Treatment for Drug Use

An important concomitant of society's definition of drug use as a social problem has been an extensive effort in recent years to provide treatment and rehabilitation opportunities for the drug user. Considerable sums of money have been invested to expand Federal as well as state and local facilities to provide a wide variety of treatment modalities. Because of the general interest in treatment as it relates to drug use, all men in the sample who reported any use of any drug, including tobacco, were asked a series of questions about their treatment experiences.

Obviously, the number of men reporting such experiences will be small in a random sample of the population of young men. Although small in absolute terms, this number is highly significant when it is considered in relation to the extent of drug use. Reported in this chapter are the findings regarding the number of men who were ever treated, the number of times they were treated and the drugs for which they were treated.

The number of times the respondents were ever treated is shown in Table 12.1. As expected,

Table 12.1. Number of Times Treated, All Drugs

Number of Times Treated	Frequency	% Total
0	2,442	97.3
1	45	1.8
2	13	.5
3	3	*
4	2	*
5	1	*
6	3	*
7	0	-
8	1	*
Total Number of Men Treated	68	

*Less than one-half of one percent.

treatment was a rare event in the sample under study. Only 68 (3 percent) of the men reported one or more treatment experiences in response to the questions: "Have you ever undergone treatment of any kind for your use of any drugs, including alcohol and tobacco?"; "Altogether, how many times have you been in treatment?" Of the 68 men who were treated, two-thirds had been in treatment only once; the remaining 23 men experienced from two to eight periods of treatment.

While the number of men who received treatment is small, these men are, nevertheless, clustered in terms of the drugs for which they were treated (Table 12.2). Tobacco is not included in this tabulation. Because some men were treated for more than one drug, the sum of the entries in this table is greater than 68. Clearly, use of alcohol and heroin resulted in greater absolute numbers of men treated; however, relative to the number of users, heroin was the drug most likely to lead to treatment. Of the 148 heroin users 14 percent were treated one or more times.

Treatment for Heroin Use

Twelve of the light and heavy users of heroin were treated; these men comprise 34 percent of the light and heavy heroin users. Of the 18 heavy users of heroin, one-half received treatment for their use of this drug. If daily use of heroin is taken as an indicator of involvement with this opiate, 16 (34 percent) of the 47 who at some time used the drug daily reported one or more treatment experiences. Naming heroin, 43 men responded positively to the question, "Have you ever been physically or psychologically dependent on any drug, or addicted to any?" Of these men 15 or 35 percent indicated that they had been in treatment for heroin use.

Although a relatively small proportion of the heroin users received some kind of therapy (albeit a much larger proportion than for any other drug), it appears that a significant proportion of the men who used heroin to an extent that they required treatment did, in fact, receive treatment.

Whether or not treatment was successful is a question that will require further analysis of the data on cessation of use and abstinence. At this point, it may be noted that 15 of the 20 men treated for heroin use indicated that they either reduced their use of heroin or stopped using it after their first experience in treatment. However, half of these men who were treated reduced or stopped their use of heroin for less than one month; of the remaining ten men, seven did so for no more than four months and only three for more than six months.

Selected data on the first period of treatment for these 20 men are presented in Table 12.3. For 13 of them, this was the only treatment

Table 12.2. Number of Men Receiving Treatment for Specific Drugs

DRUG	NUMBER	% OF USERS
Alcohol	27	1.1
Marihuana	5	*
Psychedelics	7	1.3
Stimulants	8	1.2
Sedatives	4	*
Heroin	20	13.5
Opiates	3	*
Cocaine	2	*

*Less than one percent.

Table 12.3. Selected Characteristics of First Treatment Experience of Those Treated for Heroin Use

A. Place where treated	Freq.	Percent
Doctor's private practice	2	10
Therapeutic community	0	0
Prison or jail	1	5
Military clinic or hospital	6	30
Other clinic or hosp.	10	50
Other	1	5
	20	100
B. Type of treatment		
Individual	7	35
Group	8	40
Both	5	25
	20	100
C. Voluntary program?		
Yes	19	95
No	1	5
	20	100
D. Inpatient-outpatient?		
Inpatient	12	60
Outpatient	8	40
	20	100
E. Methadone used in treatment?		
Yes	12	63
No	7	37
	19[a]	100

F. Type of methadone treatment	Freq.	Percent
Detoxification	9	75
Maintenance	3	25
	12	100
G. Length of time in treatment		
Under 1 month	2	10
1-2 months	3	15
3-4 months	1	5
5-6 months	2	10
7-11 months	3	15
1 year or more	4	20
Unknown	5	25
	20	100
H. Length of time cut down or stopped using		
Under 1 month	10	50
1-2 months	5	25
3-4 months	2	10
5-6 months	0	0
7-11 months	1	5
1 year or more	2	10
	20	100

[a]One case missing because of incomplete information.

they received. The remainder were treated from two to four times; however, the later periods of treatment differed little from the first one in terms of the variables shown in Table 12.3.

Most of the men were treated in military clinics or in other clinics or hospitals. The type of treatment was almost equally divided between individual and group therapy, and nearly all of the men entered the treatment programs voluntarily. Methadone was used in 63 percent of the treatments. In 9 of these 12 instances, it was used in a detoxification program; only three men were in methadone maintenance programs. The length of time in treatment ranged from under one month to a year or more.

In Table 12.4 the 20 treated heroin users are compared with the remaining 128 untreated users on four characteristics. In Panel A in this table it is shown that the treated men tended to be slightly younger than those who were not treated in terms of when they first used heroin. The average number of years of heroin use was 4.7 among those who were treated in comparison with 4.0 in the untreated group. These findings are consistent with the figures on extent of use. Taken together, they suggest greater involvement with heroin in the case of the users who received treatment.

Racial differences and differences in social class origin, as measured by father's education, were negligible. A major difference concerned current use of heroin; 65 percent

Table 12.4. Selected Characteristics of Treated and Non-Treated Heroin Users

	Treated (n=20)[a]		Untreated (n=128)[a]	
	%	n	%	n
A. Age at first heroin use				
Under 18	25	(5)	17	(22)
18 - 22	65	(13)	69	(87)
Over 22	10	(2)	13	(17)
	100	(20)	99	(126)
B. Race				
White	70	(14)	67	(86)
Black	30	(6)	28	(36)
Other	0	(0)	5	(6)
	100	(20)	100	(128)
C. Father's education				
Less than high school	39	(7)	37	(42)
High school graduate	39	(7)	38	(43)
Some college	22	(4)	25	(28)
	100	(18)	100	(113)
D. Most recent use of heroin				
Before 1974	35	(7)	73	(93)
1974-75	65	(13)	27	(33)
	100	(20)	100	(126)

[a]Discrepancies between these figures and subtotals for certain variables result from missing information on these variables.

Table 12.5. Reasons for and Problems Associated With Heroin Use: Treated and Untreated Heroin Users

A. Reason for use	Treated (n=20) %	n	Untreated (n=128) %	n
To forget troubles	80	(16)	27	(35)
To relax	75	(15)	25	(32)
It was expected	45	(9)	20	(26)
To get high	95	(19)	86	(110)
From force of habit	65	(13)	25	(32)
To heighten senses	35	(7)	13	(16)
To pass the time	65	(13)	29	(37)
To get through the day	75	(15)	9	(12)

B. Problems	Treated (n=20) %	n	Untreated (n=128) %	n
Health	50	(10)	6	(8)
Work	40	(8)	5	(6)
With wife	50	(10)	16	(21)
With parents	55	(11)	9	(11)
With friends	35	(7)	11	(14)
With the law	35	(7)	11	(14)

of the men who had been treated for heroin use were currently using it, in contrast with 27 percent of the men who had never been treated for use of heroin. These data suggest that users who enter treatment comprise those least likely to succeed in terminating the use of heroin.

Finally, comparisons of the treated and untreated users are presented in Table 12.5 in terms of their reasons for use and problems reported in connection with their use of heroin. Without exception there was greater endorsement of each of the reasons for heroin use among the treated men. Differences between the treated and untreated men were greatest for the reasons that are more likely to reflect addiction, such as to forget troubles, to relax, from force of habit and to get through the day. "To get high" was a reason given by almost all of the treated men, but it was also endorsed by the majority of the untreated men.

At least half of the men who had been treated for their use of heroin reported problems with their parents, wife or with their health. All of the problems were reported more frequently by the treated than the untreated users of heroin.

In summary, relatively few users of any drug received treatment for drug use. In this connection it must be remembered that the sample is restricted to young men, and drug use tended to be more prevalent and more extensive among the youngest of them. It may be assumed that use of a drug must extend

over a considerable period of time before it troubles the user sufficiently that he seeks treatment or before it brings him to the attention of others who pressure him to seek treatment; as a result, the low incidence of treatment in this sample may be a function of the age of the respondents and the fact that they have been using drugs a relatively short time. Among those who continue to use some of these drugs, it is likely that the percentages who eventually are treated will be higher. This speculation is supported by the findings for heroin users. It is clearly those who used heroin more extensively and who were or came close to being addicts, rather than the experimental users, who experienced problems due to their use of heroin, and they were most likely to be treated.

13 Regional Variations in Use

Data on the locations where men were living at the time of the interview became available late in the process of preparing this report. The computer tape has not been checked with the interview schedules, but it is known that the location of one respondent is listed incorrectly. Consequently, data are available for 2,509 rather than 2,510 men. The importance of the available data justify inclusion of a brief discussion of regional variations.

Data on the lifetime use of all drugs except tobacco and alcohol are presented in Table 13.1 in terms of the four regions and nine major divisions of the United States. The percentages for the regions are offset and enclosed in parentheses to facilitate comparisons.

For five of the drugs the rank order of the regions is the same; the West had the highest percentage, and was followed by the Northeast, North Central and the Southern regions. This pattern was observed for marihuana, psychedelics, stimulants and sedatives; it also held for cocaine, as the apparent tie between the North Central and Southern regions disappeared when an extra decimal place was used. A similar pattern appeared for heroin, except that the position of the Southern and North Central regions was reversed. The only major exception was in use of the other opiates; the highest percentage was found in the North Central region, and it was followed by the West, South and Northeast. There are only minor differences among the latter three regions.

With the exception of the opiates, the percentages of use in the West were well above the national averages. Without exception the percentages for the South were below the national averages, and only for opiates did the percentage differ by less than 10 percent of the national average. The Northeast tended to be above and the North Central region below the percentages for the total sample, but the differences were usually small.

When divisions within the regions are examined, some of the patterns are stable. The Pacific division had the highest percentage for all drugs except opiates, and even for opiates the figure was not much below the percentage in the total sample. This should not be generalized too far; almost all of the respondents in this division were in California. The Mountain division also had high percentages of use. It had the highest percentage for opiates, and was second only to the Pacific division for stimulants, heroin and cocaine. All of the states in the division were represented in the sample, but most of the respondents resided in Arizona, Colorado and Montana.

The East South Central division usually had the lowest percentage of use; the exceptions were heroin and cocaine, but even for these drugs, the percentages in this division were among the lowest and below the national average. These are probably better estimates than for most divisions. Kentucky, Tennessee and Alabama were well represented, and only Mississippi was noticeably underrepresented.

The West South Central division tended to have the next lowest percentages. Texas accounted for most of the cases, but there were a fair number of respondents from Louisiana and Oklahoma; only Arkansas was greatly underrepresented.

The findings were similar for current drug use. The data in Table 13.2 again show that the percentages of use were highest in the West, except for opiates, but there was a tie

Table 13.1. Lifetime Drug Use by Regions and Divisions of U.S. in Which Respondents Lived at Time of Interview (Percentages)

		Marihuana	Psychedelics	Stimulants	Sedatives	Heroin	Opiates	Cocaine
Northeast	(459)	(61)	(24)	(26)	(24)	(6)	(28)	(16)
New England	(149)	64	27	28	24	6	28	17
Mid-Atlantic	(310)	59	22	26	24	6	28	15
North Central	(706)	(54)	(21)	(25)	(18)	(4)	(36)	(11)
East North Central	(464)	53	21	23	16	4	36	12
West North Central	(242)	54	22	29	21	4	37	11
South	(840)	(48)	(18)	(24)	(17)	(5)	(29)	(11)
South Atlantic	(488)	52	20	25	18	5	32	12
East South Central	(146)	40	14	22	10	5	23	10
West South Central	(206)	46	15	23	17	5	28	8
West	(461)	(63)	(28)	(38)	(26)	(9)	(30)	(22)
Mountain	(132)	60	21	34	20	7	38	18
Pacific	(329)	64	31	40	28	10	27	24
Out of U.S.	(43)	(60)	(26)	(26)	(30)	(9)	(21)	(14)
Total	(2509)	(55)	(22)	(27)	(20)	(6)	(31)	(14)

Table 13.2. Current (1974-75) Use of Drugs by Regions and Divisions of U.S. in Which Respondents Lived at Time of Interview (Percentages)

		Marihuana	Psychedelics	Stimulants	Sedatives	Heroin	Opiates	Cocaine
Northeast	(459)	(45)	(5)	(9)	(9)	(2)	(7)	(7)
New England	(149)	48	6	9	10	2	5	9
Mid-Atlantic	(310)	43	5	9	8	3	8	6
North Central	(706)	(35)	(7)	(13)	(8)	(2)	(13)	(6)
East North Central	(464)	35	7	11	8	2	12	6
West North Central	(242)	36	8	16	9	2	15	7
South	(840)	(33)	(7)	(8)	(9)	(1)	(11)	(5)
South Atlantic	(488)	36	8	9	10	*	12	6
East South Central	(146)	27	6	8	6	1	10	6
West South Central	(206)	31	2	8	11	1	10	4
West	(461)	(45)	(10)	(19)	(10)	(3)	(7)	(11)
Mountain	(132)	41	6	17	8	2	8	9
Pacific	(329)	47	12	20	11	4	6	12
Out of U.S.	(43)	(37)	(16)	(9)	(14)	(5)	(14)	(9)
Total	(2509)	(38)	(7)	(12)	(9)	(2)	(10)	(7)

*Less than half of one percent.

with the Northeast for current marihuana use. The South had the lowest percentages for marihuana, stimulants, heroin and cocaine. Its highest relative rankings were for psychedelics and sedatives, and for these drugs the South was tied for second place with the North Central and Northeast regions, respectively.

There was more variation among the nine divisions for current than lifetime use. The Pacific division ranked highest for psychedelics, stimulants, heroin and cocaine; it was tied for first place for sedatives, and it was second highest--and almost equal to the Northeast--for marihuana. However, for opiate use it ranked eighth.

The percentages for lifetime use were high in the Mountain division, but this region was usually in the middle of the rankings in terms of current use. Only for stimulants and cocaine was it as high as second place. As was the case for lifetime use, the East South Central division had low percentages of current use, but it was not clearly the lowest. The West South Central division also tended to have low percentages but was tied for first place on sedative use.

Regional differences on current and lifetime use are not identical; this can be seen by examining the distribution of the highest and second highest ranks of the seven drugs across the nine geographical divisions. For lifetime use the Pacific division had 6 of these 14 high percentages, while the Mountain division had 4, the Northeast 3, and the West North Central 1. The Middle Atlantic division also had 1, by virtue of a tie for second place for sedatives. The other four divisions had none of the first or second place rankings.

On the other hand, for current use the Pacific division again had 6 of the high percentages, while the Mountain, Northeast, West North Central and South Atlantic divisions had 2 each, and the Middle Atlantic, East North Central, South Atlantic and West South Central had 1 each. Only one division, the East South Central, did not rank as high as second for any of the drugs.

Part of this difference is an artifact. There were more ties in the rankings of current use; thus, there were more high percentages to tabulate. The percentages for current use fell within a narrower range, and this increased the probability of ties. The fact remains that more of the divisions ranked high in terms of current use of one of the drugs than was the case for lifetime use.

While there were differences among the four regions, it should also be emphasized that even the region that showed the lowest percentage for any drug, whether for lifetime or current use, was never far below the percentage for the nation as a whole. The differences were greater among the nine divisions, but the representativeness of the sample for these divisions is questionable, and sampling variation may explain most of these differences. Further, regional differences have not yet been examined in connection with other variables; if, for example, one region or division included a high proportion of respondents from large cities this would inflate the rates of drug use in that area. In later reports the data pertaining to regional variations will be examined in greater detail.

APPENDIX I

Quasi-Medical Use

A. Opiates

The criteria used for classifying some opiate use as quasi-medical use were as follows:

Variable	Response accepted as consistent with quasi-medical use	Response regarded as inconsistent with quasi-medical use
1. Reasons given for use	To help get to sleep or relax; to enable one to get through the work day	Any other response, e.g., to get high or stoned, boredom, habit
2. Frequency and amount of use	No more than once or twice a week, never in large amounts	Use almost every day or use of large amounts
3. Source of drug	From own prescription, or by purchase or a gift	Any other response, e.g., stealing the drug, obtaining by forged prescriptions
4. Route of administration	Oral	Use of needle, smoking, sniffing or snorting
5. Use in combination with other drug(s) because respondent liked the effect	Denial	Any such use of combinations of drugs
6. Spree use	Denial	Stayed up or high on an opiate for more than a day at a time
7. Dependence	Denial	Report of physical or psychological dependence on or addiction to opiates
8. Treatment	Denial	Any treatment for use of opiates
9. Number of opiates	No more than three	Four or more different opiates used
10. Attribution to military service	Denial	Statement that drug would not have been used if man had not been in the service
11. Use of heroin	Denial	Admitted

The criteria are not equally important, and there are arbitrary elements in several of them. On the other hand, if a man stated he used opiates to get high, stayed high for more than a day at a time or combined them with other drugs because he liked the effect, such a single response would seem to justify the conclusion that not all of his use of opiates was quasi-medical.

There were 286 users of opiates who met all of the eleven criteria. These included: 199 of the 499 who had used less than 10 times; 80 of the 225 who had used 10 to 99 times; 6 of the 42 who had used 100 to 999 times; and 1 of the 13 who had used 1000 times or more. These 286 men are classified as quasi-medical users.

The requirement that all of the criteria had to be met may seem too rigid; perhaps those who met 9 or 10 of the 11 should also be regarded as quasi-medical users. There were 129 men who failed to meet only one criterion. Of these, 86 failed the first one; they stated, for example, that they had used opiates to get high. An additional 12 men had used a route of administration other than oral, 11 attributed their opiate use to military service, and 9 admitted a period of daily use or use of large amounts. Four men had used opiates in combination with another drug because they liked the effect, and four had obtained opiates by means other than purchase or gift. For these cases there is reason to believe that some of the man's use of opiates was not quasi-medical.

This leaves three cases, of whom one used more than three different opiates and two used heroin. The decision not to classify these men as quasi-medical users was arbitrary, but it makes little practical difference because all three men are classified as experimental users.

There were 146 men who met all but two of the criteria, but 144 of these were excluded on such grounds as the reasons given for use, frequency and amount of use, source of the drug and the route of administration.

B. Stimulants

The same eleven criteria were used for the stimulants, except that use of cocaine was substituted for use of heroin, "to stay awake or alert" was substituted for "to help get to sleep or relax" and all references to opiates were changed to stimulants.

There were 108 users of stimulants who met all 11 criteria: 86 among the 293 who had used less than 10 times; 19 among the 261 who had used 10 to 99 times; 3 among the 102 who had used 100-999 times; and none among the 33 who had used 1000 times or more. These 108 men are classified as quasi-medical.

There were an additional 157 men who failed to meet only one criterion. Of these, 98 gave reasons for use such as to get high. An additional 18 men had used cocaine, and 14 had stayed high on stimulants more than a day at a time. Ten men had used stimulants in combination with other drugs, and six attributed their use of stimulants to military service. Four men had used on a daily basis or in large quantities, and four had used other than oral routes of administration. Two said they had been dependent on stimulants, and one man had used more than three different stimulants. The first four of these criteria were involved in 116 cases of the 119 who failed two of the criteria.

The classification of the few cases who failed to meet one criterion again makes little practical difference, since 14 of the 19 were experimental users, and the remaining five had used 10-99 times. Again, therefore, only those men who met all 11 criteria were classified as quasi-medical users.

C. Sedatives

The criteria were the same as those for opiates, except that use of heroin was eliminated, and all references to opiates were changed to sedatives. There were 99 men who met all 10 criteria: 86 among the 263 who had used less than 10 times; 12 among the 170 who had used 10-99 times; 1 among the 59 who had used 100-999 times; and none among the 16 who had used 1000 times or more. These 99 men are classified as quasi-medical users of sedatives.

There were an additional 174 men who failed to meet only one criterion. Of these 158 gave reasons for use such as to get high. Five men said they would not have used sedatives if they had not been in the military service, and four had used sedatives in combination with other drugs. Three men had used more than three different sedatives, and two had used them on a daily basis or in large amounts. One man had stayed high on sedatives for more than a day at a time, and one considered himself to have been dependent on sedatives. Among the 92 men who failed two criteria, 85 did so by the reasons given for use. As with opiates and sedatives the decision was made to classify as quasi-medical users only those men who met all 10 criteria.

APPENDIX II

Specific Drugs Used Within Drug Classes

A. Psychedelics
(550 Users)

Used no psychedelics		1960
" 1	170	
" 2	94	
" 3	83	
" 4	68	
" 5	53	
" 6	39	
" 7	21	
" 8	14	
" 9	6	
Number used unknown	2	
Total users	550	550
Total sample		2,510

Mescaline	395
LSD	382
THC	298
Peyote	157
Psilocybin	156
PCP	108
STP	70
DMT	64
MDA	21
Belladonna	7
Mushrooms	5
Morning Glory Seeds	4
DET	1
Other or Don't Know	23

B. Stimulants
(689 Users)

Used no stimulants		1821
" 1	330	
" 2	138	
" 3	93	
" 4	65	
" 5	25	
" 6	16	
" 7	8	
" 8	3	
" 9	2	
" 10	0	
" 11	1	
Number used unknown	3	
Total users	689	689
Total sample		2,510

Amphetamine	361
Benzedrine	327
Dexedrine	253
Methedrine	245
Dexamyl	68
Unknown	54
Ritalin	43
Preludin	39
"White Crosses"	35
"Black Beauties"	20
Desoxyn	6
"Uppers", "Pep Pills",etc	24

C. Sedatives
(508 Users)

Used no sedatives		2002
" 1	203	
" 2	98	
" 3	73	
" 4	33	
" 5	25	
" 6	26	
" 7	15	
" 8	14	
" 9	7	
" 10	3	
" 11	4	
" 12	2	
Number used unknown	5	
Total users	508	508
Toatal sample		2,510

Valium	272
Seconal	254
Quaalude, Sopors	198
Librium, Libritabs	140
Tuinal	135
Phenobarbital	120
Nembutal	110
Amytal	31
Equanil or Miltown	24
Desbutal	16
Carbrital	15
Doriden	15
Placidyl	15
"Downers"	8
Valmid	8
Butisol	7
Luminal	3
Noludar	3
Veronal	2
Other or Don't Know	42

D. Opiates
(779 Users)

Used no opiates		1731
" 1	418	
" 2	172	
" 3	64	
" 4	42	
" 5	28	
" 6	17	
" 7	12	
" 8	14	
" 9	6	
" 10	6	
Total users	779	779
Total sample		2,510

Codeine	482
Darvon	375
Opium	209
Opiated hashish	208
Demerol	101
Morphine	74
Paregoric	65
Methadone	62
Percodan	35
Talwin	31
Dilaudid	18
Laudanum	5
Hycodan	3
Other	6

E. Inhalants
(399 Users)

Used no inhalants		2111
" 1	300	
" 2	66	
" 3	20	
" 4	8	
" 5	2	
" 6	2	
" 7	1	
Total users	399	399
Total sample		2,510

Airplane glue	188
Amyl Nitrite	126
Aerosol sprays	61
Nitrous oxide	47
Ether	29
Gasoline	21
Toluene	9
Thinners	8
Freon	7
Lighter fluid	6
Carbon Tetrachloride	4
Contact cement	2
Nail polish remover	1
Other	44

F. Other Drugs

Thorazine	104
Elavil	22
Millaril	22
Compazine	15
Stelazine	10
Tofranil	6
Sparine	3
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INDEX

Note: Nine drug classes or specific drugs were included in the study; tobacco, alcohol, marihuana, psychedelics, stimulants, sedatives, heroin, opiates and cocaine. These are not listed in the index, because when any of them is mentioned all are normally discussed in the text, so a general reference to drugs suffices to locate the nine classes. There are a few exceptions, when only alcohol, marihuana or heroin are discussed, and these are listed.

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